

FNL CF
1.4
10/04/06



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

October 4, 2006

Ken Marcy, Task Monitor
United States Environmental Protection Agency
1200 Sixth Avenue, Mail Stop ECL-115
Seattle, Washington 98101

RE: Contract No. EP-S7-06-02, Technical Direction Document Number 06-01-0035
Former Nike Launch Site #81 Site Reassessment (SR) Report

Dear Mr. Marcy:

Enclosed please find the final version of the SR report for the Former Nike Launch Site #81 site, located in Poulsbo, Washington.

If you have any questions or comments regarding this report, please contact me at (206) 624-9537.

Sincerely,
ECOLOGY AND ENVIRONMENT, INC.

Renee Nordeen
START-3 Project Leader

Enclosure

cc: Ken Marcy, EPA, Site Assessment Manager, Region 10, Seattle, WA
Mark Woodke, E & E, START Project Manager, Seattle, WA



**Former Nike Launch Site #81
Site Reassessment Report
Poulsbo, Washington**

TDD Number: 06-01-0035

**Region 10
START-3**

Superfund Technical Assessment and Response Team

September 2006

**Prepared for: Ken Marcy; Task Monitor
United States Environmental Protection Agency
1200 Sixth Avenue, Mail Stop ECL-115
Seattle, Washington 98101**

Table of Contents

Section	Page
1	Introduction 1-1
2	Site Background.....2-1
2.1	Site Location 2-1
2.2	Site Description 2-2
2.3	Site Ownership History 2-2
2.4	Site Operations and Source Characteristics 2-2
2.5	Site Characterization 2-4
2.5.1	Previous investigations..... 2-4
2.5.2	START Site Visit 2-10
2.6	Summary of SR Investigation Locations 2-10
3	Field Activities and Analytical Protocol3-1
3.1	Sampling Methodology 3-1
3.1.1	Sediment Sampling 3-2
3.1.2	Groundwater Sampling 3-2
3.1.3	Surface Water Sampling..... 3-2
3.1.4	QA/QC Sampling 3-2
3.2	Analytical Protocol..... 3-3
3.3	Global Positioning System 3-3
3.4	Investigation-Derived Waste..... 3-3
4	Quality Assurance/Quality Control4-1
4.1	Satisfaction of Data Quality Objectives 4-1
4.3	Project-Specific Data Quality Objectives 4-2
4.3.1	Precision 4-2
4.3.2	Accuracy..... 4-2
4.3.3	Completeness 4-3
4.3.4	Representativeness 4-3
4.3.5	Comparability..... 4-3
4.4	Laboratory QA/QC Parameters 4-3
4.4.1	Temperatures/Holding Times..... 4-3
4.4.2	Laboratory Blanks 4-4
4.4.3	Trip Blanks 4-4
4.4.4	Serial Dilution 4-4

Table of Contents (cont.)

Section	Page
5	Analytical Results Reporting and Background Samples5-1
5.1	Analytical Results Evaluation Criteria..... 5-1
5.1.1	Sample Results Reporting..... 5-2
5.2	Background Samples..... 5-2
5.2.1	Background Groundwater 5-2
5.2.1.1	Sample Location 5-2
5.2.1.2	Sample Results..... 5-2
5.2.2	Background Sediment 5-2
5.2.2.1	Sample Location 5-2
5.2.2.2	Sample Results..... 5-3
5.2.3	Background Surface Water 5-3
5.2.3.1	Sample Location 5-3
5.2.3.2	Sample Results..... 5-3
6	Potential Sources6-1
6.1	Source Description 6-1
7	Migration/Exposure Pathways and Targets7-1
7.1	Groundwater Migration Pathway 7-1
7.1.1	Geologic Setting..... 7-1
7.1.2	Aquifer System..... 7-1
7.1.3	Drinking Water Targets..... 7-2
7.1.3.1	Sample Locations..... 7-3
7.1.3.2	Sample Results..... 7-3
7.2	Surface Water Migration Pathway 7-3
7.2.1	Overland Route 7-3
7.2.2	Drinking Water Targets..... 7-4
7.2.3	Human Food Chain Targets 7-4
7.2.4	Environmental Targets 7-5
7.2.5	Sample Locations 7-5
7.2.6	Sample Results 7-5
8	Summary and Conclusions8-1
8.1	Sources 8-1
8.2	Targets..... 8-2
8.3	Conclusions 8-2
9	References9-1

Table of Contents (cont.)

Section	Page
---------	------

LIST OF APPENDICES

A	SAMPLE PLAN ALTERATION FORM.....	A-1
B	PHOTOGRAPHIC DOCUMENTATION.....	B-1
C	DATA VALIDATION MEMORANDA AND ANALYTICAL RESULTS	C-1
D	GLOBAL POSITIONING SYSTEM DATA	D-1



List of Tables

Table		Page
3-1	Sample Collection and Analytical Summary	3-5
6-1	Selected 1996 Site Inspection Samples Analytical Results Summary	6-2
7-1	Groundwater Drinking Water Population with a 4-Mile Radius	7-6
7-2	Fish Catch Data within the 15-Mile Target Distance Limit	7-6
7-3	Sediment Samples Analytical Results Summary	7-7
7-4	Surface Water Samples Analytical Results Summary	7-8

List of Figures

Figure	Page
2-1 Site Vicinity Map.....	2-11
2-2 Site Location Map.....	2-12
2-3 Historic Site Map.....	2-13
2-4 Site Map.....	2-15
3-1 Sample Location Map.....	3-6
7-1 4-Mile Map	7-9
7-2 15-Mile Map	7-11

List of Abbreviations and Acronyms

<u>Acronym</u>	<u>Definition</u>
amsl	above mean sea level
Army	United States Army
AST	Aboveground Storage Tank
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLP	Contract Laboratory Program
CRQL	Contract Required Quantitation Limit
DERP	Defense Environmental Restoration Program
DMC	Deuterated Monitoring Compound
DQOs	data quality objectives
E & E	Ecology and Environment, Inc.
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FNLS #81	Former Nike Launch Site #81
FWI	First Western Investments, Inc.
GPS	Global Positioning System
HOCs	Halogenated Organic Compounds
IDW	investigation-derived waste
LES	Law Environmental Services
MEL	Manchester Environmental Laboratory
MS	matrix spike
NDMA	n-nitrosodimethylamine
MSD	matrix spike duplicate
PCBs	polychlorinated biphenyls
Pesticides	Chlorinated Pesticides

<u>Acronym</u>	<u>Definition</u>
PPE	probable point of entry
ppb	parts per billion
ppm	parts per million
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RPD	relative percent difference
SI	site inspection
SMC	System Monitoring Compound
SOW	Statement of Work
SQAP	sampling and quality assurance plan
SQL	sample quantitation limit
SPAF	Sample Plan Alteration Form
SR	Site Reassessment
START	Superfund Technical Assessment and Response Team
SVOCs	semivolatile organic compounds
TAL	Target Analyte List
TDL	target distance limit
TM	Task Monitor
UDMH	unsymmetrical dimethylhydrazine
U. S.	United States
USACE	United State Army Corps of Engineers
USTs	Underground Storage Tanks
VOCs	volatile organic compounds

The United States (U.S.) Environmental Protection Agency (EPA) has tasked Ecology and Environment, Inc. (E & E) to provide technical support and conduct a site reassessment (SR) at the Former Nike Launch Site #81 (FNLS #81) which is located in Poulsbo, Kitsap County, Washington. E & E completed the SR activities under Technical Direction Document Number 06-01-0035 issued under EPA, Region 10, Superfund Technical Assessment and Response Team (START)-3 contract Number EP-S7-06-02. The specific goals for this SR were intended to address site assessment objectives and are presented below:

- Determine off-site migration of contaminants;
- Provide the EPA with adequate information to determine whether the site is eligible for placement on the National Priorities List; and
- Document any threat or potential threat to public health or the environment posed by the site.

As directed by the EPA Task Monitor (TM), source samples were not collected as part of the SR. Completion of this SR included reviewing site information, determining regional characteristics, collecting receptor information within the site's range of influence, executing a sampling plan, and producing this report.

This document includes site background information (Section 2); field sampling activities and analytical protocols (Section 3), quality assurance/quality control (QA/QC) criteria (Section 4), analytical results reporting and background sampling (Section 5), potential sources (Section 6), migration/exposure pathways and targets (section 7), summary and conclusions (Section 8), and references (Section 9).

2

Site Background

This section describes the site location (subsection 2.1), site description (subsection 2.2), site ownership history (subsection 2.3), site operations and waste characteristics (subsection 2.4), site characterization (subsection 2.5), and summary of investigation locations (subsection 2.6).

2.1 Site Location

Site Name:	Former Nike Launch Site #81
CERCLIS ID Number:	WA0001414184
Location:	Finn Hill Road Poulsbo, Washington 98370
Latitude:	47° 45' 27", North
Legal Description:	Section 10, Township 26 North, Range 1 East
Longitude:	122° 39' 43", West
County:	Kitsap
Congressional District:	1
Site Owner/Operator:	Wal-Mart Stores, Inc. Bentonville, Arkansas 72716-8611 (479) 273-4314
Site Contact (b) (6) Family, former property owners)	(b) (6) c/o (b) (6) First Interstate Investments 100 Second Avenue South, Suite 250 Edmonds, Washington 98020-1449 (425) 775-6000

2.2 Site Description

The FNLS #81 is an inactive U.S. Army (Army) Nike Ajax missile launch facility located approximately 1.5 miles northwest of Poulsbo, Washington city limits on the north side of Finn Hill Road (Figures 2-1 and 2-2). The site originally consisted of 81.91 acres of level and sloping ground containing three missile launch silos, a generator building, a missile assembly building, a missile fueling station (acid fueling station), a maintenance shop (consisting of two sheds), barracks, pad-mounted transformers and a well house (Figure 2-3). All buildings associated with the site's use as a missile launch facility have been demolished. The former missile silo area is now the location of a Wal-Mart, Inc. store that opened in January 2006. A small strip mall (still under construction) and a Home Depot, Inc. store have also been constructed in the area of the former missile silos (Figure 2-4). These constructed areas are paved but the remainder of the property is still undeveloped (E & E 2006a). The primary land uses surrounding the site include undeveloped and residential land and State Route 3 on the southeast (E & E 2006a).

2.3 Site Ownership History

The FNLS #81 began operation in 1955 as a Nike Missile Launch facility by the Army (E & E 1996). The site was constructed by the Army on land obtained via acquisitions in fee, easements, and licenses made between 1955 and 1959 (USAED 1985). Disposal of the property occurred between 1966 and 1980 by various means, with 35.57 acres containing facility structures conveyed by the United States General Services Administration to (b) (6) in February 1967 (USAED 1985). (b) (6) used the property for two to three years for horse and cattle pasturage, and added on to the assembly building which he rented for approximately one and a half years. (b) (6) is deceased and First Western Investments (FWI) represents his estate (b) (6) 2006). A Wal-Mart store, a Home Depot store and a strip mall currently exist on a portion of the former (b) (6) property; the remainder is still owned by the (b) (6) family (b) (6) 2006).

2.4 Site Operations and Source Characteristics

Information regarding site-specific operations and waste characteristics for the period that the site was an active facility is incomplete. However, a report prepared by

Law Environmental Services (LES) for the Army Corps of Engineers (USACE) titled "*The Nike Missile Site Investigation Program*" (LES, n.d.) is available which describes general activities at Nike Ajax missile sites across the nation. Information contained in this report will be used to supplement the site history.

The FNLS #81 was in operation from approximately 1955 through 1967 (E & E 1996). An aerial photograph review of the site revealed the presence of several buildings and roads in 1956 (E & E 1996). It is assumed that operations at the site began in this year. Nike Ajax missiles were deployed by the Army throughout the continental U.S. to protect major metropolitan areas and strategic military installations from aerial attack (LES, n.d.).

A septic system consisting of a 12,000 gallon septic tank and drainfield with 1,100 lineal feet of drain line was once present near the barracks (McLeod 1967). Battery electrolyte may have been disposed of to the septic system, as may have wastes requiring disposal during the facility deactivation process (LES, n.d.). At one time seven transformers were located on site: three platform-mounted near the site access road, three pad-mounted near the generator building, and one pole-mounted near the barracks. The three platform-mounted transformers and the pole-mounted transformer were found to contain polychlorinated biphenyls (PCBs) in excess of 50 parts per million (ppm), and were removed from the site (ERM 1992). Information regarding the pad-mounted transformer results was not found.

Missiles and warheads were assembled, maintained, prepared for firing, and stored at the launch area of a Nike site, with each of these activities being conducted at a separate building or locations at the site. Missiles were fueled at outdoor fueling stations with acidic liquid fuels including inhibited red fuming nitric acid, unsymmetrical dimethyl hydrazine (UDMH), aniline/furfuryl alcohol, and ethylene oxide, all of which are highly toxic. In addition, battery electrolyte, potentially containing lead, reportedly was discarded at fueling stations on Nike sites (LES, n.d.). Missile assembly operations involved the use of various solvents, anticorrosion products, and paints (LES, n.d.). Missile assembly buildings also were equipped with a full-length waste fluid collection system and associated underground drainfields (LES, n.d.). The presence of such a drainage system at the site has not been confirmed; however, records of the sale of site property list a waste sewer system containing 250 lineal feet of drain line for acid as a line item asset (McLeod 1967). The location of this system is not provided and, if

present at the site, may be associated with either the missile assembly building or with the acid fueling station. Maintenance of the missile batteries in a combat ready status required the storage, handling, and disposal of missile components as well as solvents, fuels, hydraulic fluids, paints, and other materials required for support functions (LES, n.d.).

Three subterranean missile launch silos were present at the Nike site prior to construction of the Wal-Mart facility. The former missile silo area is now the location of a Wal-Mart store that opened in January 2006. The silos were imploded and fill material was used to level the site (b) (6) 2006). The silos extended to approximately 25 feet below ground surface (bgs) and one contained elevators for access. One missile magazine was associated with each silo. Typically, Nike magazines contained a floor drainage system which permitted waste materials to be washed to a central sump located under the silo elevator shaft (LES, n.d.). As a general practice at Nike sites, solvents, paints, and hydraulic fluid were washed to the sumps (LES, n.d.).

The former sources at the site include contaminated soil near the former acid fueling station, missile assembly building, maintenance shop, generator building, underground storage tanks (USTs), and missile silo area. The soil was paved over in 2005 for construction of the Wal-Mart store and associated parking lot.

Potential contaminants of concern at the site associated with Nike missile operations not previously analyzed for include the following analytes associated with rocket fuels: n-nitroso-dimethylamine (NDMA), perchlorate and UDMH. Sediment and surface water samples were also analyzed for chlorinated pesticides (pesticides), PCBs, target analyte list (TAL) metals, semivolatile organic compounds (SVOCs), and volatile organic compounds (VOCs).

2.5 Site Characterization

This subsection describes previous investigations and the START site visit.

2.5.1 Previous investigations

In August 1985, the USACE, Seattle District conducted a survey of the site under the Defense Environmental Restoration Program (DERP). This survey determined that the site was essentially as the Army had left it in 1967 and that all Nike-era structures on the property had been used by (b) (6) for various purposes. The survey concluded

that because all site facilities had been used by the current property owner, and because the property owner did not express an interest in having remedial work done under DERP, no further action was required (USAED 1985).

In August 1992, a consultant to the USACE, Seattle District provided permanent closure services for the four USTs previously used to store fuel. Two 2,000-gallon USTs (81L-2 and 81L-3) were associated with the generator building, one 500-gallon UST (81L-4) was associated with the assembly building, and one 2,000-gallon UST (81L-5) was associated with the barracks. Soil samples were collected adjacent to the USTs and submitted for gasoline-, diesel-, and oil-range petroleum hydrocarbons; benzene, toluene, ethyl benzene, and xylenes; and lead analysis. Analytical results revealed fuel-related soil contamination at both USTs near the generator building and also at the UST near the barracks. Fifteen cubic yards of contaminated soil were removed from around one UST (81L-2) at the generator building. No other contaminated soils were removed. All USTs were excavated, emptied of contents, cleaned, and the contents and USTs disposed off site. Excavated soils were stockpiled at the site. (WSI 1993)

In September 1992, a consultant for FWI completed a Phase I and II environmental site assessment of the FNLS #81. During this investigation, samples were collected from on-site structures of materials suspected of containing asbestos. Analytical results indicated the presence of asbestos in the hard fittings on the piping system in the bathroom of the assembly building, in all rooms of the barracks, in insulation on a large tank in the boiler room of the barracks, and in the vinyl floor tile and associated mastic in the barracks (ERM 1992). Further, insulation of power cables in the floor of the generator building, possibly containing asbestos, was not sampled because the power to these cables may still have been connected (ERM 1992). Although not sampled due to access limitations, asbestos was suspected to be present in the entry door to each missile silo as well as in the wall spacers inside the 2 x 4 foot frame walls of the generator building (ERM 1992). All aboveground asbestos-containing material had reportedly been abated (E & E 1996). Also as a part of this investigation, soil samples of areas suspected of containing hazardous substances were collected. Soil samples submitted for analyses included a three-part composite sample of soils in the drainage ditch adjacent to the silos collected from 0 to 12 inches bgs (SP-1), one composite sample each of soils adjacent to the north (MS-1) and east (MS-2) sides of the northern maintenance shed, and one sample (ST-1) from beneath a drainage pipe associated with

the barracks septic system. All four samples were submitted for VOC analyses (EPA Method 8240). Samples SP-1, MS-1, and ST-1 were submitted for hydrocarbon identification and quantification (Washington Department of Ecology [Ecology] Method HCID-WTPH), with diesel detected in SP-1 at a concentration of 290 ppm and 2-butanone detected in MS-1 at a concentration of 0.52 ppm (E & E 1996). Samples SP-1 and ST-1 were also analyzed for chromium and total lead (ERM 1992), with concentrations in SP-1 at 17 ppm and 18 ppm, respectively, and chromium detected in ST-1 at a concentration of 21 ppm (E & E 1996).

In 1994, subsurface exploration was performed at, and adjacent to, the Nike site by Harza Northwest, Inc. A truck-mounted drill rig was used to drill eight widely-spaced boreholes (Harza 1994). Three of the boreholes (B-1, B-2, B-3) were drilled within or bordering the FNLS #81. Groundwater was encountered in two of these borings at depths of 9 and 20 feet bgs; this groundwater was possibly perched. According to borehole logs, the upper 1.5 to 5 feet of surface soils consist of loose to dense silty sand. In boring B-1, very dense olive grey sand was encountered under the upper horizon at 5 feet bgs. In borings B-2 and B-3, the upper horizon was underlain by interbedded mottled silty sand, clayey sand, sand, and silty clay/clayey silt (Harza 1994). The lower horizon ranged in thickness from 2.5 to 3 feet thick. Boring B-2 contained very dense olive grey sand from 8 feet bgs to the bottom of the hole at 20.5 feet bgs. Boring B-3 contained very dense olive grey silty sand from 5.5 feet bgs to the bottom of the hole at 20.5 feet bgs. A significant percentage of gravel and cobbles was encountered in all borings throughout the drilled intervals (Harza 1994).

In September 1995, the three pad-mounted and the three platform-mounted transformers were sampled and analyzed for halogenated organic compounds (HOCs; EPA Method 9076 - modified) and PCBs (EPA Method 8080). In October 1995, the pole-mounted transformer also was sampled and analyzed for HOCs (Method ASTM D-808) and PCBs (EPA Method 600/4-81-045). Analytical results indicated that the pole-mounted and three platform-mounted transformers contained PCBs above 50 ppm up to 157 ppm and that the three pad-mounted transformers contained less than 1 ppm PCBs. HOC concentrations for the platform-mounted transformer ranged from 126 to 206 ppm, the pole-mounted transformer contained 480 ppm HOCs, and the three pad-mounted transformers contained less than 100 ppm HOCs. In February 1996, the four PCB transformers were manifested off-site for disposal (Reynolds 1996).

In September 1995, the USACE excavated four test pits in, or adjacent to, the former location of UST 81L-2 at the generator building (USACE 1995). At least one soil sample was collected from each pit for fixed laboratory analyses of gasoline-, diesel-, and oil-range petroleum hydrocarbons; benzene, toluene, ethylbenzene, and xylene; and total lead (USACE 1995). Analytical results for this work are not available (Bilodeau 1996). Reportedly, the fifteen cubic yards of soil previously excavated from this location were transported to an off-site disposal facility in conjunction with this sampling effort (Bilodeau 1996). No additional work was conducted for contaminated soils adjacent to 81L-3 or 81L-5 because one UST was determined not to require further investigation under State of Washington UST regulations and the other UST location could not be identified (Bilodeau 1996). A draft request for partial closure of USTs at the site was submitted by the USACE to Ecology on September 27, 1996 in an Independent Remedial Action report (Bilodeau 1996). In November 1995, a consultant for FWI collected one water sample from each of the three silos. Approximately 17 feet of water was present in each silo with each silo estimated to contain 240,070 gallons of water. The samples were composites consisting 50% of water taken from the surface and 50% of water taken from the bottom of the water column. The samples were analyzed for total petroleum hydrocarbons (EPA Method 418.1), VOCs (EPA Method 624), PCBs (EPA Method 8080), and priority pollutant metals (EPA Method 6010, except for mercury which was analyzed by cold vapor extraction; Becker 1996). Concentrations of PCBs were detected in all three samples in the 0.8 to 0.9 parts per billion (ppb) range, and concentrations of both total and dissolved lead, copper, and zinc were also detected in all three samples. In September 1996, water in the silos was pumped out by this consultant to an irrigation line laid out in the field north of the drainage ditch adjacent to the silos.

In April 1996, lead-based paint in the bathroom of the officers quarters (in the barracks; Figure 2-3) and in the bathroom of the assembly building was removed and placed in 55-gallon drums by a consultant to FWI. On October 8, 1996, the START met (b) (6) a member of the (b) (6) family, and (b) (6), a planning consultant to FWI, near the site. A walk-through of all on-site structures was conducted with the exception of the missile silos because the elevators to the silos have not been operational since the transformers were removed. The missile assembly building (Figure 2-3) contained seven 55-gallon drums marked "Danger/Lead" that were generated during the lead-based paint abatement in April 1996. Two of the drums reportedly were empty.

The drums were stored in a room that contained a pile of debris and three of the drums were resting on this pile. Most of the floor space of this building was covered with debris largely consisting of inert materials such as wood, doors, old mattresses, pipes, and an abandoned refrigerator. No drainage trenches drain pipes, or sumps were observed that might have indicated the presence of a drainage system which is generally associated with Nike assembly buildings. A small building was located northwest of the assembly building. This building contained two open bags of concrete and one 55-gallon fiber drum labeled "Meadow Gold". The drum felt empty when pushed. The maintenance shop (Figure 2-3) consisted of two contiguous sheds. The smaller shed contained very little debris. The larger shed was full of debris consisting of remnants of cable wire on spools, wood, workbenches, empty 5-gallon buckets, tires, and metal tubing among other items. Much of the concrete floor of the larger shed was stained with what appeared to be motor oil. The acid fueling station (Figure 2-3) contained a concrete pad, approximately 10 by 15 feet; a concrete structure that appeared to be a hexagonal vault or tank; and a second concrete pad, approximately 4 by 7 feet. These structures were contiguous and a water pipe with a shower head and a vent pipe extended from the second concrete pad (which was believed to be the foundation for an acid fueling station). The area was heavily vegetated and no outward signs of a drain field were present (i.e., sumps or drains). The generator building (Figure 2-3) contained an aboveground storage tank previously used by the Army to store diesel fuel and later used by (b) (6) to store gasoline. Two series of trenches ran the length of the concrete foundation of the building. The northernmost trenches were used to convey piping from the aboveground storage tank (AST) to the generators. The southernmost trenches were used for electrical conduit. No drains or sumps were observed in these trenches or in the building foundation. A vent pipe extended from the ground on the northwest corner of the building. The pipe was connected to the AST and at one time also was connected to the former UST that was located in this area. A fenced enclosure containing the three pad-mounted transformers (non-PCB transformers) was located southeast of the generator building (Figure 2-3). The concrete under the transformers appeared to be stained with oil. Although the missile silos were not entered, the concrete roofs of the silos, which are at the ground surface, were observed. The silo roofs contained several pipe, wiring, and ventilation vaults. A large, backfilled excavation was present north of each silo. The excavations extended across the silo perimeter road north to the drainage

ditch. Nearly the entire length of the drainage ditch had also been excavated and backfilled as had a trench along the northern side of the road to the generator building. The excavations were conducted to remove suspected asbestos containing electrical conduit leading from the generator building to the missile silos (E & E 1996). The barracks septic system was located southeast of site's property boundary on land sold by (b) (6) to the State of Washington in the 1970s. A locked gate was present in the site's perimeter fence at this location.

The well house (Figure 2-3) contained a water tank with an approximate capacity of 1,000 gallons and the water well. The well pump had been disconnected; however, it was still in place.

Between December 1996 and January 1997, the START conducted on-site sampling activities to determine whether hazardous substances remained at the site. A total of 43 soil samples were collected at the Nike site and were analyzed for pesticides, PCBs, TAL metals, SVOCs, and VOCs. The analytical results indicated significant concentrations of the pesticide 4,4'-DDT and the TAL metals cadmium, lead, magnesium and nickel; there were no significant PCB, SVOC, or VOC concentrations.

A total of ten groundwater samples were collected, seven of which were from off-site drinking water wells where no elevated concentrations were detected. Three groundwater samples were collected on-site, including two from shallow groundwater obtained from Geoprobe™ boreholes, and one from the former drinking water well. The Geoprobe™ samples were collected from approximately 5 feet bgs near the transformer pad and acid fueling station, respectively. Significant concentrations of lead and nickel were identified. However, these exceedances were from samples collected in shallow groundwater and not from drinking water.

The sample from the former drinking water well contained elevated concentrations of lead and nickel. This well has not been used for drinking water purposes for several years and there are no plans to use it in the future (Svarthumle 2006).

No other significant or elevated concentrations were identified in either source samples or target samples during this investigation.

2.5.2 START Site Visit

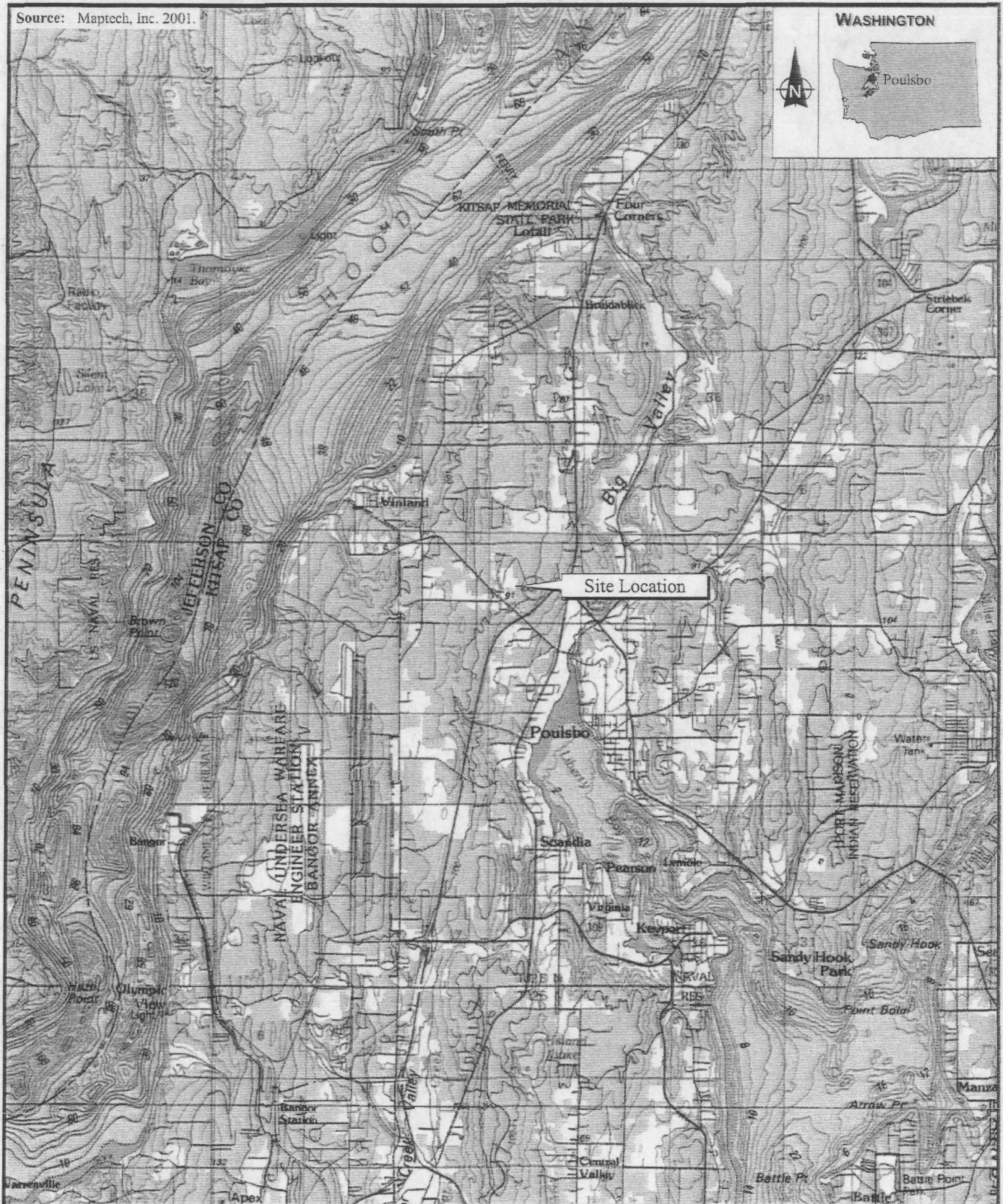
On March 7, 2006, one START member met with the representative of the (b) (6) Family, (b) (6) of FWI; Fred Becker, an environmental consultant that had performed previous site work on the property; and Keith Svarthumle, utilities foreman for the City of Poulsbo. (b) (6) showed the location of the on-site well (currently on the perimeter of the Wal-Mart parking lot but maintained by the City of Poulsbo) and Mr. Svarthumle showed the location of the Bus Barn well (a City well located approximately 0.3 mile downgradient from the site). The on-site well has not been maintained for several years and its' integrity is unknown. The former location of the missile silos is now a Wal-Mart store and a small strip mall with a paved parking lot between them (Figure 2-4). No former site features remain other than the on-site well.

2.6 Summary of SR Investigation Locations

Sampling under the SR was conducted at areas (i.e., targets) that may have been contaminated through the migration of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-regulated hazardous substances from on-site sources. Sources were not sampled during the SR at the direction of the EPA TM because any potential remaining sources are now underneath pavement. The features identified for inspection under the FNLS #81 SR were determined based on a review of background information. These features are discussed below:

Targets:

- **Groundwater.** Groundwater potentially has been impacted by on-site sources. This investigation will assist in determining whether the shallow aquifer near the site has elevated concentrations of contaminants not previously analyzed for, including perchlorate, UDMH and NDMA.
- **Sediment and Surface Water.** Sediment and surface water potentially have been impacted by on-site sources. This investigation will assist in determining whether sediment and surface water near the site have elevated concentrations of contaminants, including pesticides, PCBs, SVOCs, TAL metals, and VOCs, and some contaminants not previously analyzed for, including perchlorate, UDMH and NDMA.



ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

FORMER NIKE
LAUNCH SITE #81
Poulsbo, Washington

0 .75 1.5
Approximate Scale in Miles

Figure 2-1
SITE VICINITY MAP

Date:
9-19-06

Drawn by:
AES

10:START-3\06010035\fig 2-1



ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

FORMER NIKE
LAUNCH SITE #81
Poulsbo, Washington

0 .75 1.5
Approximate Scale in Miles

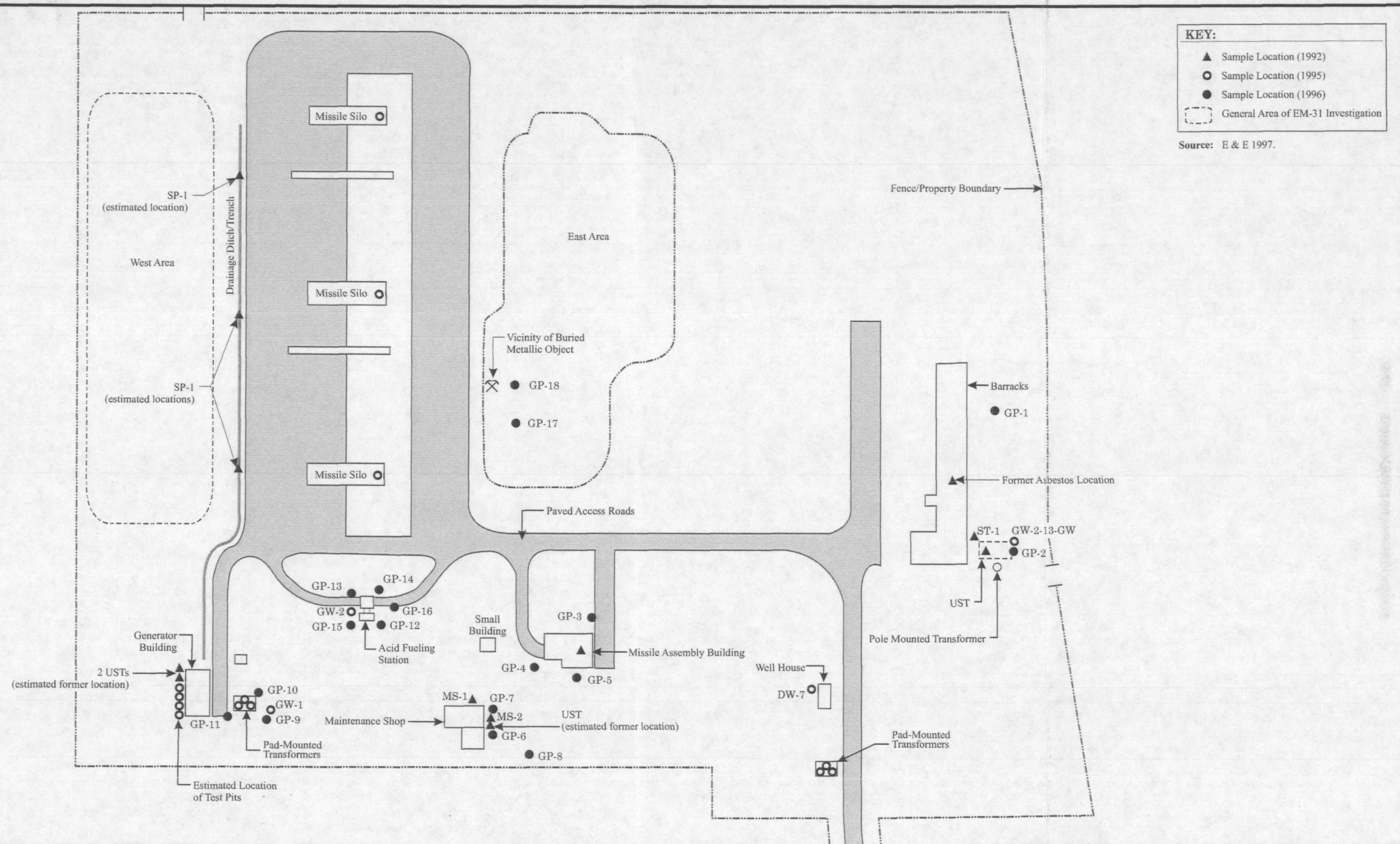
Date:
9-19-06

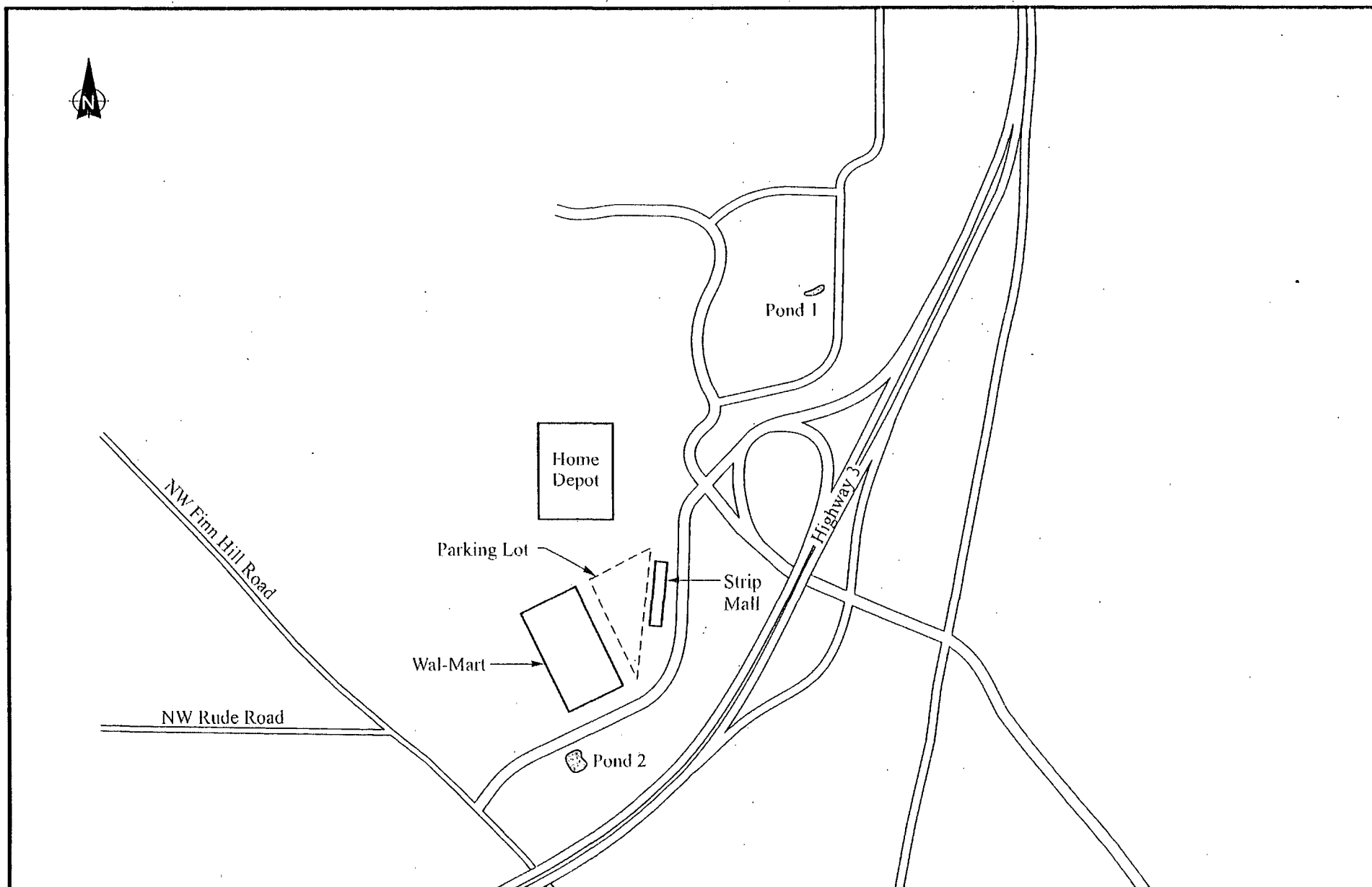
Drawn by:
AES

Figure 2-2

SITE LOCATION MAP

10:START-3\06010035\fig 2-2





ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

FORMER NIKE
LAUNCH SITE #81
Poulsbo, Washington

Not to Scale

Figure 2-4
SITE MAP

Date:
9/25/06

Drawn by:
AES

10:START-3\06010035\fig 2-4

3

Field Activities and Analytical Protocol

A sampling and quality assurance plan (SQAP) for the FNLS #81 project was developed by the START prior to field sampling. The SQAP describes the sampling strategy, sampling methodology, and analytical program used to investigate potential hazardous substance sources and potential targets. With few exceptions, SR field activities were conducted in accordance with the approved SQAP. Deviations from the SQAP are described in this section, Section 7 (target areas) and in the sample plan alteration form (SPAF; Appendix A).

The SR field sampling event was conducted on June 6, 2006. A total of 15 samples, including three background samples, and one QA (trip blank) sample, were collected for the SR. Sample types and methods of collection are described below. A list of all samples collected for laboratory analysis under the SR is contained in Table 3-1. Photographic documentation of SR field activities is included as Appendix B.

Alphanumeric identification numbers applied by the START to each sample location (e.g., MN01GW01) are used in the report as the sample location identifiers. Table 3-2 summarizes the sample tracking and location codes. Sample locations are provided in Figure 3-1.

This section describes sampling methodology (subsection 3.1), analytical protocol (subsection 3.2), global positioning system (GPS; subsection 3.3), and investigation-derived waste (IDW; subsection 3.4).

3.1 Sampling Methodology

Grass leaves and other vegetative material, rocks, and other debris unsuitable for analysis were removed from samples before being placed into sample containers.

3 Field Activities and Analytical Protocol

A sampling and quality assurance plan (SQAP) for the FNLS #81 project was developed by the START prior to field sampling. The SQAP describes the sampling strategy, sampling methodology, and analytical program used to investigate potential hazardous substance sources and potential targets. With few exceptions, SR field activities were conducted in accordance with the approved SQAP. Deviations from the SQAP are described in this section, Section 7 (target areas) and in the sample plan alteration form (SPAF; Appendix A).

The SR field sampling event was conducted on June 6, 2006. A total of 15 samples, including three background samples, and one QA (trip blank) sample, were collected for the SR. Sample types and methods of collection are described below. A list of all samples collected for laboratory analysis under the SR is contained in Table 3-1. Photographic documentation of SR field activities is included as Appendix B.

Alphanumeric identification numbers applied by the START to each sample location (e.g., MN01GW01) are used in the report as the sample location identifiers. Table 3-2 summarizes the sample tracking and location codes. Sample locations are provided in Figure 3-1.

This section describes sampling methodology (subsection 3.1), analytical protocol (subsection 3.2), global positioning system (GPS; subsection 3.3), and investigation-derived waste (IDW; subsection 3.4).

3.1 Sampling Methodology

Grass leaves and other vegetative material, rocks, and other debris unsuitable for analysis were removed from samples before being placed into sample containers.

Samples were stored on ice in coolers continuously maintained under the custody of START personnel. Sampling methods used for each sample type are described below.

3.1.1 Sediment Sampling

Two sediment samples (PD01SD01 and PD02SD01) were collected including one background sample. A planned sediment sample was not collected from Johnson Creek as no sediment was present. All sample aliquots were collected using dedicated stainless steel spoons at depths from 0 to 6 inches bgs except aliquots for VOC analysis which were collected directly into Core N' One™ soil samplers from 0 to 6 inches bgs. Material for the remaining analyses was collected into a dedicated stainless steel bowl, homogenized, and then transferred into appropriate prelabeled sample containers.

3.1.2 Groundwater Sampling

Nine groundwater samples (MN01GW01, MN02GW01, MW01GW01, and DW01GW01 through DW06GW) were collected including one background sample. The monitoring well sample aliquots were collected using a groundwater pump with a flow rate set at approximately 1 liter per minute. Water quality parameters were not collected; all locations were purged for a minimum of 15 minutes prior to sample collection. The municipal and domestic well samples were collected by running the water for a minimum of 15 minutes prior to collecting the sample. Material was collected directly into the sample containers. Aliquots for VOC analyses were preserved to a pH < 2 with hydrochloric acid.

3.1.3 Surface Water Sampling

Three samples (PD01SW01, PD02SW01 and CR01SW01) were collected including one background sample. All sample aliquots were collected by dipping the sample container directly into the water. The surface water samples were collected before the sediment samples at each of the two co-located points (PD01 and PD02). Aliquots for VOC analyses were preserved to a pH < 2 with hydrochloric acid.

3.1.4 QA/QC Sampling

One trip blank sample (Contract Laboratory Program [CLP] sample number J73W7) was collected directly into the sample container from a distilled, deionized water

source prior to the field event. The trip blank was preserved to a pH < 2 with hydrochloric acid and was maintained with the sample containers throughout the field event.

3.2 Analytical Protocol

Analytical methods applied to SR samples include fixed laboratory analysis of pesticides, PCBs, SVOCs, VOCs (EPA CLP Statement of Work [SOW] SOM01.1), TAL metals (CLP SOW ILM05.3), perchlorate (EPA Method 314.0), NDMA (EPA SW-846 Method 8270C), and hydrazines (internal laboratory method STL SOP UDMH). The types of analysis applied to samples were based on known or suspected contaminants. For this reason, some samples were not analyzed for all of the analytical methods listed above. Table 3-1 lists analyses applied to each sample. Analyses of samples collected during the SR for pesticides, PCBs, SVOCs, and VOCs were performed by DataChem Laboratories, Inc., a CLP laboratory located in Salt Lake City, Utah. Analyses of samples collected during the SR for TAL metals were performed by Bonner Analytical, a CLP laboratory located in Hattiesburg, Mississippi. Analyses of samples collected during the SR for NDMA and perchlorate were performed by the EPA Manchester Environmental Laboratory (MEL) located in Port Orchard, Washington. Analyses of samples for UDMH were performed by STL-Denver, Inc., a START-subcontracted commercial laboratory located in Arvada, Colorado. Analytical data validation memoranda are provided in Appendix C.

3.3 Global Positioning System

A Garmin eTrex GPS survey unit was used by the START personnel to approximate the sample location coordinates of the SR samples. Recorded GPS coordinates by sample point were used to locate samples on Figure 3-1 and are listed in Appendix D.

3.4 Investigation-Derived Waste

IDW generated during the SR sampling effort consisted of solid disposable sampling equipment and disposable personal protection equipment. All IDW was

disposed as non-hazardous waste by the START at a municipal landfill in nearby Seattle, Washington.

Table 3-1 Sample Collection and Analytical Summary

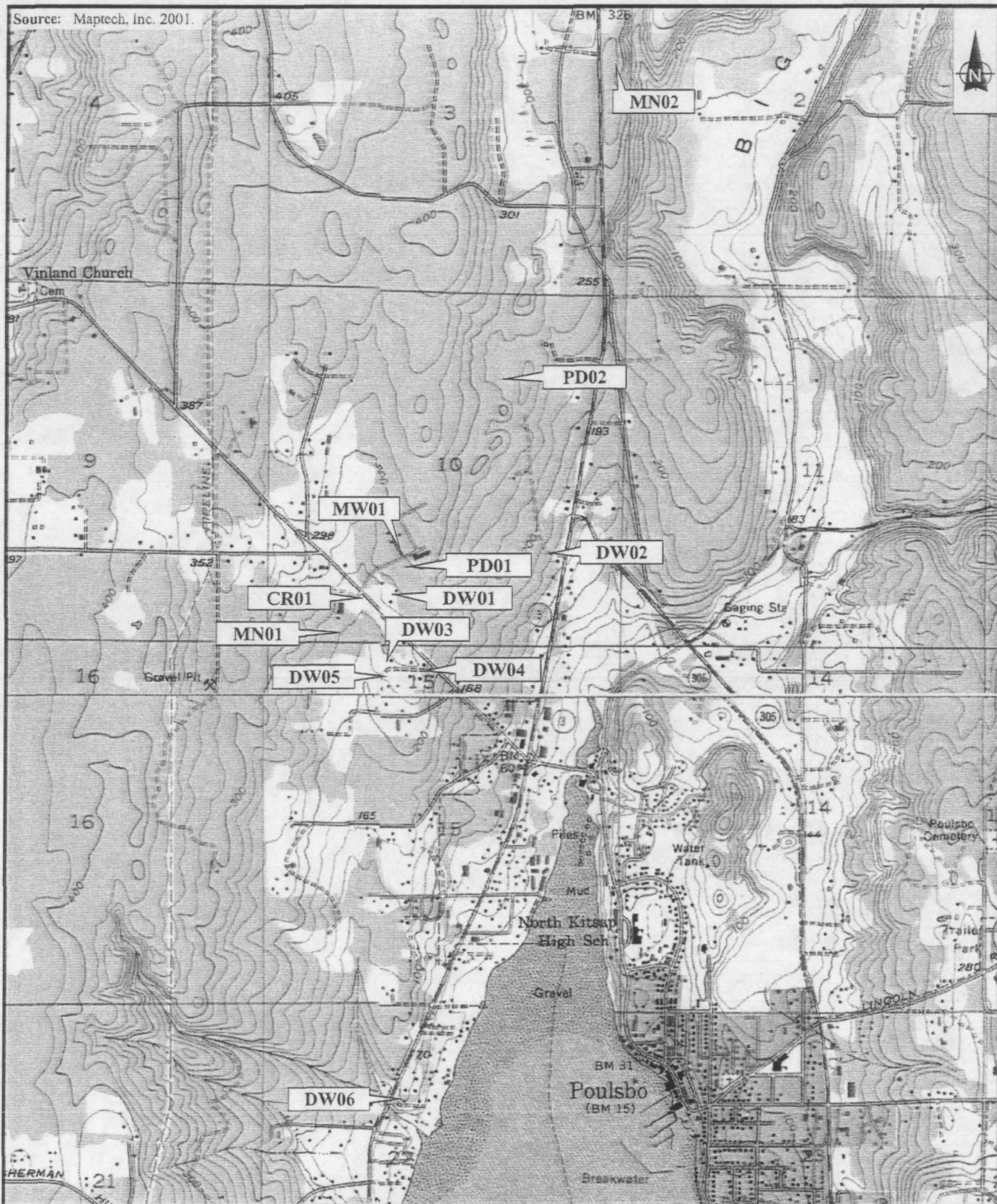
EPA Sample ID	CLP Sample ID	SAMPLE COLLECTION INFORMATION					ANALYSES									Sample Description
		Location ID	Matrix	Sampler	Date	Time	NDMA	Perchlorate	Pesticides	PCBs	SVOCs	TAL	Metals	UDMH	VOCs	
06234050	NA	MN01GW01	GW	JF	6/6/2006	08:35	X	X					X		Poulsbo Bus Barn Well. Clear, no odor.	
06234051	NA	MN02GW01	GW	JF	6/6/2006	08:55	X	X					X		Poulsbo Westside Well - Background GW. Clear, no odor. Perchlorate MS/MSD.	
06234052	NA	MW01GW01	GW	JF	6/6/2006	10:35	X	X					X		Poulsbo Monitoring Well. Clear, no odor.	
06234053	J73T9	PD01SW01	SW	JF	6/6/2006	15:00	X	X	X	X	X	X	X	X	Pond 2. Clear, no odor.	
06234054	J73W0	PD01SD01	SED	JF	6/6/2006	15:15	X	X	X	X	X	X	X	X	Pond 2. Light brown sandy silt, no vegetation.	
06234055	J73W1	PD02SW01	SW	JF	6/6/2006	15:20	X	X	X	X	X	X	X		Pond 1 - Background SW. Clear, no odor.	
06234056	J73W2	PD02SD01	SED	JF	6/6/2006	15:30	X	X	X	X	X	X	X	X	Pond 1 - Background Sediment. Light brown sandy silt, no vegetation. MS/MSD.	
06234057	J73W3	CR01SW01	SW	JF	6/6/2006	14:45	X	X	X	X	X	X	X	X	Johnson Creek. Clear, no odor. MS/MSD.	
06234061	NA	DW01GW01	GW	JF	6/6/2006	11:30	X	X					X		Accumar Corporation. Clear, no odor.	
06234062	NA	DW02GW01	GW	JF	6/6/2006	10:30	X	X					X		(b) (6) Residence. Clear, no odor. Perchlorate MS/MSD.	
06234063	NA	DW03GW01	GW	JF	6/6/2006	10:50	X	X					X		(b) (6) Residence. Clear, no odor.	
06234064	NA	DW04GW01	GW	JF	6/6/2006	13:00	X	X					X		Residence. Clear, no odor.	
06234065	NA	DW05GW01	GW	JF	6/6/2006	13:30	X	X					X		Residence. Clear, no odor.	
06234066	NA	DW06GW01	GW	JF	6/6/2006	09:55	X	X					X		Residence. Clear, no odor.	
NA	J73W7	Trip Blank	TB	JF	6/6/2006	08:00								X	Trip Blank 1	

^a Inorganic CLP sample identifications are the same as organic but start with "M".

Key:

bgs = Below ground surface.
 CLP = Contract Laboratory Program.
 EPA = United States Environmental Protection Agency.
 GW = Groundwater.
 ID = Identification.
 JF = Joe Fowlow.
 NA = Not Applicable.
 NDMA = N-Nitrosodimethylamine.
 PCBs = Polychlorinated Biphenyls.
 Pesticides = Chlorinated Pesticides.
 SED = Sediment.
 SVOCs = Semivolatile Organic Compounds.
 TAL = Target Analyte List.
 TB = Trip Blank.
 UDMH = Unsymmetrical Dimethyl Hydrazine.
 VOCs = Volatile Organic Compounds.

Source: Maptech, Inc. 2001.



ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

FORMER NIKE
LAUNCH SITE #81
Poulsbo, Washington

0 1000 2000
Approximate Scale in Feet

Figure 3-1

SAMPLE LOCATION MAP

Date:
9-19-06

Drawn by:
AES

10:START-3\06010035\fig 3-1

4

Quality Assurance/Quality Control

QA/QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of sampling equipment, glassware, and reagents. Specific QC requirements for laboratory analyses are incorporated in the *Contract Laboratory Program Statement of Work for Organic Analyses* (EPA 2003) and the *Contract Laboratory Program Statement of Work for Inorganic Analyses* (EPA 2004b). These QC requirements or equivalent requirements found in the analytical methods were followed for analytical work on the SR. This section describes the QA/QC measures taken for the SR and provides an evaluation of the usability of data presented in this report.

All samples were collected following the guidance of the SQAP (E & E 2006b) and the START quality assurance project plan (QAPP; E & E 2005). Data from the CLP and MEL laboratories were reviewed and validated by EPA chemists. Data from the commercial laboratory were reviewed and validated by a START chemist. Data qualifiers were applied as necessary according to the following guidance:

- *EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 2004a); and
- *EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (EPA 1999).

In the absence of other QC guidance, method-specific QC limits were also utilized to apply qualifiers to the data.

4.1 Satisfaction of Data Quality Objectives

The following EPA (EPA 2000) guidance document was used to establish data quality objectives (DQOs) for this SR:

- *Guidance for the Data Quality Objectives Process* (EPA QA/G-4), EPA/600/R-96/055.

The EPA TM determined that definitive data without error and bias determination would be used for the sampling and analyses conducted during the field activities. The data quality achieved during the fieldwork produced sufficient data that met the DQOs stated in the SQAP. A detailed discussion of accomplished SR objectives is presented in the following subsections.

4.3 Project-Specific Data Quality Objectives

The laboratory data were reviewed to ensure that DQOs for the project were met. The following describes the laboratories' ability to meet project DQOs for precision, accuracy, and completeness and the field team's ability to meet project DQOs for representativeness and comparability. The laboratories and field team were able to meet DQOs for the project.

4.3.1 Precision

Precision measures the reproducibility of the sampling and analytical methodology. Laboratory and field precision is defined as the relative percent difference (RPD) between duplicate sample analyses. The laboratory duplicate samples or MS (matrix spike)/MS duplicate (MSD) samples measure the precision of the analytical method.

The RPD values were reviewed for all commercial laboratory samples. All duplicate sample results were within QC limits. The DQO for precision of 85% was met.

4.3.2 Accuracy

Accuracy measures the reproducibility of the sampling and analytical methodology. Laboratory accuracy is defined as the deuterated monitoring compound (DMC)/system monitoring compound (SMC) spike percent recovery for organic analyses or the MS percent recoveries for all analyses. The DMC/SMC percent recovery values were reviewed for all appropriate sample analyses. All DMC/SMC results were within QC. The MS percent recovery values were reviewed for all MS/MSD analyses. A total of 10 sample results (approximately 1.1% of the data) were qualified as estimated

quantities (J) based on MS percent recovery outliers. The project DQO for accuracy of 85% was met.

4.3.3 Completeness

Data completeness is defined as the percentage of usable data (usable data divided by the total possible data). All data were reviewed for usability. Five sample results were rejected (approximately 0.6% of the data); therefore the project DQO for completeness of 90% was met.

4.3.4 Representativeness

Data representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point or environmental condition. The number and selection of samples were determined in the field to account accurately for site variations and sample matrices. The DQO for representativeness of 85% was met.

4.3.5 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Data produced for this site followed applicable field sampling techniques and specific analytical methodology. The DQO for comparability was met.

4.4 Laboratory QA/QC Parameters

The laboratory data also were reviewed for temperatures/holding times, laboratory blank samples, trip blank samples, and serial dilution samples. These QA/QC parameters are summarized below. In general, the laboratory and field QA/QC parameters were considered acceptable.

4.4.1 Temperatures/Holding Times

The samples were maintained within QC temperature limits. All samples met QC holding time criteria.

4.4.2 Laboratory Blanks

All laboratory blanks met the frequency criteria. The following potential contaminants of concern were detected in the laboratory blanks and were qualified as not detected (U) as listed in the data validation memoranda:

- Pesticides: methoxychlor;
- SVOCs: acetophenone, bis(2-ethylhexyl)phthalate, butylbenzyl phthalate, di-n-butyl phthalate;
- TAL Metals: aluminum, arsenic, zinc; and
- VOCs: methylene chloride, toluene.

4.4.3 Trip Blanks

One trip blank sample was collected during the field event; therefore meeting the frequency criteria for VOC analysis of one trip blank sample per VOC cooler. No analytes were detected in the trip blank.

4.4.4 Serial Dilution

One serial dilution sample was analyzed per 20 samples per matrix; therefore meeting the frequency criteria. Ten sample results (approximately 1.1% of the data) were qualified as estimated quantities (J or UJ) based on serial dilution QC outliers.

5

Analytical Results Reporting and Background Samples

This section describes the reporting and methods applied to analytical results presented in Sections 6 (sources) and 7 (targets) of this report, and discusses background locations and sample results. Table 3-1 lists all samples collected for laboratory analysis.

5.1 Analytical Results Evaluation Criteria

Analytical results presented in the summary tables of Section 7 show all analytes detected above laboratory detection limits in bold type. Analytical results indicating significant/elevated concentrations of contaminants in source samples (Section 6) and target samples (Section 7) with respect to background concentrations are shown underlined and in bold type. For the purposes of this investigation, significant/elevated concentrations are those concentrations that are:

- Equal to or greater than the sample's Contract Required Quantitation Limit (CRQL) or the Sample Quantitation Limit (SQL) when a non-CLP laboratory was used; and
- Equal to or greater than the background sample's CRQL or SQL when the background concentration was below detection limits; or
- At least three times greater than the background concentration when the background concentration equals or exceeds the detection limits.

The analytical summary tables present all detected compounds, but only those detected analytes at potential sources and targets meeting the significant/elevated concentration criteria are discussed in the report text. Concentrations are not considered elevated if they are not also found in sources at significant concentrations. All detected concentrations are also discussed for the background samples. When samples were

diluted for re-analysis at a laboratory, the dilution results were considered for evaluation and are provided in the tables.

5.1.1 Sample Results Reporting

The analytes aluminum, calcium, iron, magnesium, potassium, and sodium are common earth crust elements. Based on EPA, Region 10 policy, these common earth crust elements will not be discussed in this report.

5.2 Background Samples

Background groundwater, sediment and surface water samples were collected for comparison to the target groundwater, sediment and surface water samples, respectively. Results for the background samples are shown in the first column of the analytical results summary tables in Sections 6 and 7 for comparison against source and target sample results.

5.2.1 Background Groundwater

5.2.1.1 Sample Location

One off-site background groundwater sample (MN02GW01) was collected from the City of Poulsbo's Westside Well approximately 1.5 miles northeast of the site (Figure 3-1). The sample was clear with no odor.

5.2.1.2 Sample Results

None of the analyzed contaminants (NDMA, perchlorate or UDMH) were detected in the background groundwater sample.

5.2.2 Background Sediment

5.2.2.1 Sample Location

One off-site background sediment soil sample (PD02SD01) was collected from 0 to 6 inches bgs from Pond 1 approximately 3,000 feet northeast of the site (Figure 3-1). This sample was co-located with the background surface water sample (PD02SW01). The sample consisted of moist brown sand.

5.2.2.2 Sample Results

Ten TAL metals (arsenic, barium, chromium, cobalt, copper, lead, manganese, nickel, vanadium and zinc) and two VOCs (acetone and 2-butanone) were detected in sample PD02SD01. NDMA, perchlorate, pesticides, PCBs, SVOCs and UDMH were not detected in this sample. Background sediment sample results are presented in the first column of Table 7-3.

5.2.3 Background Surface Water

5.2.3.1 Sample Location

One off-site background surface water sample (PD02SW01) was collected from Pond 1 approximately 3,000 feet northeast of the site (Figure 3-1). This sample was co-located with the background sediment sample (PD02SD01). The sample was clear and had no odor.

5.2.3.2 Sample Results

One TAL metal, manganese, was detected in sample PD02SW01. NDMA, perchlorate, pesticides, PCBs, SVOCs, UDMH and VOCs were not detected in this sample. Background surface water sample results are presented in the first column of Table 7-4.

This section describes the potential source area and provides selected analytical results of samples obtained during a previous investigation at the site. Samples were not collected from the source area during the SR at the direction of the EPA TM. When appropriate, source sample results from the 1996 SI are discussed.

6.1 Source Description

The FNLS #81 source areas included the former acid fueling station, missile assembly building, maintenance shop, generator building, UST, and missile silo area. Because source samples were not collected as a part of this SR, sample results from the 1996 site inspection (SI) will be used (Table 6-1). The only contaminants detected at significant concentrations in any samples during the SI were the pesticide 4,4'-DDT (found in subsurface soil samples near the former maintenance shop area; see Figure 2-3) and the TAL metals cadmium, lead and nickel (found in subsurface soil samples near the former acid fueling station and/or in the area east of the missile silos; Figure 2-3). These sources have all been paved over since the SI.

Table 6-1 Selected 1996 Site Inspection Samples Analytical Results Summary

CLP Organic ID	JM166	JM198	JM170	JM200
Station Location	GP-1-7	GP-6-2	GP-6-7	GP-8-2
Description	Background	Maintenance Shop Area	Maintenance Shop Area	Maintenance Shop Area
<i>(Estimated Results in mg/kg)</i>				
4,4'-DDT	3.7 U	<u>5.1</u>	<u>3.8</u>	<u>8.1</u>

CLP Inorganic ID	MJM864	MJM877	MJM888	MJM866	MJM884	MJM886
Station Location	GP-1-4	GP-7-2	GP-12-2	GP-14-4	GP-16-9	GP-17-9
Description	Background	Maintenance Shop Area	Acid Station Fueling Area	Acid Station Fueling Area	Acid Station Fueling Area	East Area
<i>(Estimated Results in mg/kg)</i>						
Cadmium	0.26 U	<u>0.27</u>	<u>0.57</u>	<u>0.65</u>	na	<u>0.22</u>
Lead	5.3	<u>30.2</u>	<u>17.4 JL</u>	na	na	na
Nickel	29.9	na	na	<u>271</u>	<u>107</u>	na

Note: Bold type indicates the sample result is above the sample quantitation/detection limit.
 Underline type indicates the sample result is elevated as defined in Section 5.

Key:

CLP = Contract Laboratory Program.

ID = Identification.

J = The analyte was positively identified. The result is estimated because the concentration is below the sample quantitation limit.

L = Low bias.

 $\mu\text{g/kg}$ = Micrograms per kilogram. mg/kg = Milligrams per kilogram.

na = not applicable.

U = The analyte was not detected at or above the listed detection limit.

7 Migration/Exposure Pathways and Targets

The following subsections describe migration pathways and potential targets within the site's range of influence (Figures 7-1 and 7-2). This section discusses the groundwater migration pathway (subsection 7.1) and the surface water migration pathway (subsection 7.2). At the EPA TM's direction, the soil exposure pathway and the air migration pathway were not evaluated.

7.1 Groundwater Migration Pathway

The target distance limit (TDL) for the groundwater migration pathway is a 4-mile radius that extends from the sources at the site. Figure 7-1 depicts the groundwater 4-TDL.

7.1.1 Geologic Setting

The site is underlain by approximately 80 feet of glacial till deposited during the Vashon period (ERM 1992). Vashon till is typically impervious to groundwater flow except through thin, often discontinuous, sand and gravel stringers. The Vashon till will cause precipitation to perch at or near the ground surface and may hold such waters in shallow depressions allowing the formations of wetlands (ERM 1992). The Vashon till is underlain by the Puyallup Formation which consists of sand and gravel with some clay interbeds. The Admiralty Formation, which underlies the Puyallup Formation, is a regional clay formation of varying thicknesses with low permeability (ERM 1992).

7.1.2 Aquifer System

Well logs of test borings in the area indicate that perched water occurs on the surface of the glacial till, at an average depth of 2.5 feet bgs (ERM 1992). A boring log

of the on-site water supply well indicates that the first groundwater aquifer occurs at a depth of approximately 103 feet bgs. Static water level in the well was recorded at a depth of 93 feet bgs. The well was completed in a well graded sand formation suggesting that it taps the Puyallup Formation (ERM 1992). This well was taken out of service when transformers supplying power to the well were removed (E & E 1996).

In 1994, eight boreholes were installed at and adjacent to the FNLS #81 site by Harza Northwest, Inc. Possibly perched groundwater was encountered in two borings at depths of 9 and 20 feet bgs. The upper 1.5 to 5 feet of surface soils consist of loose to dense silty sand. In two boreholes, the upper horizon was underlain by interbedded mottled silty sand, clayey sand, sand, and silty clay/clayey silt. The lower horizon ranged in thickness from 2.5 to 3 feet thick. A significant percentage of gravel and cobbles was encountered in all borings throughout the drilled intervals (Harza 1994).

7.1.3 Drinking Water Targets

Seventeen municipal water systems are present within 4 miles of the site (Ecology 2006). The majority of these systems (11 total) consist of one well serving a small community of less than 300 people. Four of the multiple well water systems have all their wells in the same distance ring. The two remaining water systems with multiple wells (i.e., the City of Poulsbo and Naval Sub Base Bangor) have wells in more than one distance ring. The City of Poulsbo operates five wells serving approximately 7,450 people: three active, one standby, and one inactive (Svarthumle 2006). The Bangor Naval Sub Base operates four active wells serving a total population of 15,843 people (Pittman 2006). Water for both of these systems is blended and no one well contributes more than 40 percent to the water system (Pittman 2006, Svarthumle 2006).

A search of State of Washington water well reports maintained by the State of Washington (<http://apps.ecy.wa.gov/welllog/>) revealed 1,571 well logs within 4 miles of the site (Ecology 2006). Although not on record, it is expected that additional private wells exist due to the rural setting of the site. Based on the average number of persons per household for Kitsap County of 2.60 people, it is estimated that 4,084.6 people use domestic wells for drinking water (USDC 2000). The nearest well is a City of Poulsbo standby municipal well located approximately 0.3 mile southeast of the site (Ecology 2006). Populations using groundwater for drinking water are summarized in Table 7-1.

Groundwater is not used to irrigate greater than 5 acres of commercial food or forage crops, for watering of commercial livestock, commercial food preparation, as a supply for commercial aquaculture, or as a supply for a major or designated water recreation area. The site is located in a wellhead protection area (Ecology 2006).

7.1.3.1 Sample Locations

Eight groundwater samples (MN01GW01, MW01GW01, and DW01GW01 through DW06GW01) were collected from the Poulsbo Bus Barn well, the Poulsbo Monitoring well, the Accumar Corporation, and (b) (6) residences, respectively (Figure 3-1).

7.1.3.2 Sample Results

The groundwater samples were analyzed for NDMA, perchlorate and UDMH. None of these contaminants were detected in any groundwater sample.

7.2 Surface Water Migration Pathway

The surface water migration pathway TDL begins at the probable point of entry (PPE) of surface water runoff from the site to a surface water body and extends downstream for 15 miles. Figure 7-2 depicts the surface water migration TDL.

7.2.1 Overland Route

The FNLS #81 is located on a plateau on the western flank of the Big Valley River at an elevation of approximately 300 feet above mean sea level (amsl). According to borehole logs, the upper 1.5 to 5 feet of surface soils consist of loose to dense silty sand (Harza 1994). The land surface at the site sloped to the south and southeast at the time of the SI in 1996 (E & E 1997). Johnson Creek is located approximately 800 feet southwest of the site. Liberty Bay, an inlet of Puget Sound, and the mouth of the Big Valley River are both located approximately one mile southeast of the site. An overland route from the site to this surface water body was not identified in the field. Runoff from the site discharges 100 feet from the site via storm drains to Pond 2, then another 800 feet to Johnson Creek, then to Liberty Bay approximately 4,100 feet southwest of the site. The remainder of the 15-mile surface water TDL exists as a 14.05-mile radial arc in Liberty Bay and Puget Sound.

Flood frequency information is not available for this area of Poulsbo, Washington (FEMA 1981). For the purposes of this SR, the FNLS #81 is assumed to be located outside of any floodplain. There is no containment at site sources to prevent a release from these areas to surface water. The two-year, 24-hour rainfall for Poulsbo is 2.5 inches (USDC 1973). The yearly average total precipitation for Bremerton (the nearest weather station located approximately 12 miles south of the site) is 51.73 inches (WRCC 2006). Soils at the site are likely to consist of loose to dense silty sands that exhibit a moderate to fast infiltration rate. The upgradient drainage area of the site is estimated from the site visit to be approximately 500 acres (E & E 2006a).

7.2.2 Drinking Water Targets

Because Liberty Bay and Puget Sound are salt water bodies, no domestic or irrigation surface water intakes are located within 15 miles downstream of the site.

Surface water is not used for irrigation of greater than 5 acres of commercial food or forage crops, for recreational boating, for watering of commercial livestock, commercial food preparation, as a supply for commercial aquaculture, or as a supply for a major or designated water recreation area (E & E 2006a).

7.2.3 Human Food Chain Targets

Commercial and sport fishing occur within the 15-mile TDL. The 15-mile TDL is within state designated sport catch statistical area 10, and approximately 10% of the statistical area is within the TDL. Approximately 26,448 salmon were caught for sport within 15 miles downstream of the site (WDF&W 2005); an average weight of 7 pounds per sport salmon was used (E & E 1997). Approximately 1,925,000 pounds of Chinook (an average weight of 22 pounds), 11,964,000 pounds of Chum (an average weight of 9 pounds), 13,461,000 pounds of Pink (an average weight of 4 pounds), 4,767,000 pounds of Coho (an average weight of 10 pounds), and 10,428,000 pounds of Sockeye (an average weight of 6 pounds) salmon per year are caught commercially from Puget Sound (based on a five year average ending in 1993; WDF&W 1993; Wydoski 2003). Further, approximately 6,207,000 pounds of other anadromous fish and salmon eggs were harvested commercially from Puget Sound annually for this period (WDF&W 1993). It is estimated that 5% of fish and salmon eggs harvested commercially from Puget Sound

are caught within 15 miles downstream of the site. Sport catch figures for species caught within 15 miles downstream of the site are provided in Table 7-2.

7.2.4 Environmental Targets

According to National Wetland Inventory maps, approximately 60 miles of wetlands exist within 15 miles downstream of the site (USFWS 1987a, USFWS 1987b, USFWS 1987c, USFWS 1987d, USFWS 1987e). It is estimated from National Wetland Inventory maps that 0.69 mile of wetland frontage exists along Johnson Creek downstream of FNLS #81. An additional 59.31 miles of wetland frontage exist in Puget Sound within the 15-mile TDL.

7.2.5 Sample Locations

One sediment sample (PD01SD01) was collected from 0 to 6 inches bgs from Pond 2 located immediately downgradient from the site (Figure 3-1).

One surface water sample (PD01SW01) was collected from the PPE to Pond 2 and one surface water sample (CR01SW01) was collected at the PPE to Pond 2 (Figure 3-1).

7.2.6 Sample Results

Sediment sample results are summarized in Table 7-3. Sediment sample PD01SD01 did not have elevated concentrations of any contaminants.

Surface water sample results are summarized in Table 7-4. Surface water sample PD01SW01 did not have elevated concentrations of any contaminants.

Table 7-1 Groundwater Drinking Water Population with a 4-Mile Radius

Distance Ring (miles)	Well Identification	Well Population ^a	Total Population Per Distance Ring
0 to 0.25	Domestic (0)	0	0
	Municipal (0)	0	
0.25 to 0.5	Domestic (45)	117	1,979.5
	Municipal – City of Poulsbo (1)	1,862.5	
0.5 to 1	Domestic (143)	371.8	457.8
	Municipal – Poulsbo Heights (2)	86	
1 to 2	Domestic (350)	910	5,071
	Municipal – City of Poulsbo (2)	3,725	
	Back Forty (2)	42	
	Pioneer Acres (1)	30	
	Viewside Community Water (1)	108	
	Vinland View (2)	256	
2 to 3	Domestic (573)	1,489.8	3,956.3
	Municipal – City of Poulsbo (1)	1,862.5	
	Bela Vista (1)	283	
	Gala Pines Water (1)	180	
	Pioneer Hill West (1)	45	
	ScandiaLand Mobile Home Park (1)	81	
	Sherman Hill (1)	15	
3 to 4	Domestic (460)	1,196	18,464
	Municipal - Edgewater Estates (3)	1,186	
	Naval Sub Base Bangor (5)	15,843	
	Indian Hills Estates (1)	110	
	Lincoln Hills Estates (1)	31	
	Lofall Water (1)	42	
	Rhododendron Mobile Home Park (1)	56	
Total			29,928.6

Table 7-2 Fish Catch Data within the 15-Mile Target Distance Limit

Fishing Type	Type of Catch	Number of Fish	Fish Weight in Pounds	Total Pounds
Sport	Salmon	26,448	7	185,136
Commercial	Chinook	4,375	22	96,250
	Chum	66,467	9	598,200
	Pink	168,263	4	673,050
	Coho	23,835	10	238,350
	Sockeye	86,900	6	521,400
	Other Anadromous Fish and Salmon Eggs	Not Applicable	Not Applicable	310,350
Total				2,622,736
10% of the Total = the amount caught within the 15-mile TDL				262,274

Table 7-3 Sediment Samples Analytical Results Summary

EPA Sample ID	06234056	06234054
CLP Inorganic ID	MJ73W2	MJ73W0
CLP Organic ID	J73W2	J73W0
Station Location	PD02SD01	PD01SD01
Description	Pond 1 - Background	Pond 2
Inorganic Analytes (mg/kg)		
Aluminum	20,400	8,650
Arsenic	1.6	1.1 U
Barium	81.1	39.1
Calcium	4,820	4,590
Chromium	35.9	25.2
Cobalt	10.7	6.0
Copper	26.8 JL	10.0 JL
Iron	21,900	13,500
Lead	2.4	0.72 JQ
Magnesium	6,370	5,260
Manganese	303 JL	206 JL
Nickel	60.5	35.3
Potassium	970	581
Vanadium	49.3	35.6
Zinc	48.8 JL	23.3 JL
Organic Analytes (mg/kg)		
Acetone	26	40
2-Butanone	24	19

Note: Bold type indicates the sample result is above the sample quantitation/detection limit.

Key:

- bgs = Below ground surface.
- CLP = Contract Laboratory Program.
- EPA = United States Environmental Protection Agency.
- ID = Identification.
- J = The analyte was positively identified. The result is estimated because the concentration is below the sample quantitation limit.
- L = Low bias.
- µg/kg = Micrograms per kilogram.
- mg/kg = Milligrams per kilogram.
- Q = The associated sample result is less than the Contract Required Quantitation Limit.
- U = The analyte was not detected at or above the listed detection limit.

Table 7-4 Surface Water Samples Analytical Results Summary

EPA Sample ID	06234055	06234053	06234057
CLP Inorganic ID	MJ73W1	MJ73T9	MJ73W3
CLP Organic ID	J73W1	J73T9	J73W3
Station Location	PD02SW01	PD01SW01	CR01SW01
Description	Pond 1	Pond 2	Johnson Creek
Aluminum	614 JL	174 U	1,030 JL
Arsenic	10.0 UJL	10.0 UJL	13.9 JL
Calcium	6,390 JL	5,100 JL	5,160 JL
Iron	452	150	730
Manganese	24.6	23.6	58.8
Sodium	2,180 JQ	2,580 JQ	12,300

Note: Bold type indicates the sample result is above the sample quantitation/detection limit.

Key:

- CLP = Contract Laboratory Program.
- EPA = United States Environmental Protection Agency.
- ID = Identification.
- J = The analyte was positively identified. The result is estimated because the concentration is below the sample quantitation limit.
- L = Low bias.
- µg/L = Micrograms per liter.
- Q = The associated sample result is less than the Contract Required Quantitation Limit.
- TAL = Target Analyte List.
- U = The analyte was not detected at or above the listed detection limit.



ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

FORMER NIKE
LAUNCH SITE #81
Poulsbo, Washington

Figure 7-1

4-MILE MAP


0 0.5 1
Approximate Scale in Miles

Date:
9-19-06

Drawn by:
AES

10:START-3\06010035\fig 7-1



FORMER NIKE LAUNCH SITE #81 Poulsbo, Washington		Figure 7-1 4-MILE MAP	
 <p>Approximate Scale in Miles</p>	Date: 9-19-06	Drawn by: AES	10:START-3\06010035\fig 7-1

4-MILE MAP

10:START-3\06010035\fig 7-1

Note: This page is
intentionally left blank.

Source: Maptech, Inc. 2001.



7-11

In early June 2006, the START conducted SR sampling activities at the FNLS #81 site located in Poulsbo, Washington. The site is a former DoD missile launch facility located on property currently owned by Wal-Mart, Inc. The site operated as a Nike Missile Launch facility by the Army between 1955 and 1966. Disposal of the property occurred between 1966 and 1980, with 35.57 acres containing facility structures conveyed to (b) (6) in February 1967. In 1985, the USACE Seattle District conducted a survey of the site and determined that the site was essentially as the Army had left it in 1967, that all Nike-era structures on the property had been used by (b) (6) for various purposes, and because all site facilities had been used by the current property owner and the property owner did not express an interest in having remedial work done under DERP, no further action was required.

Previous field actions at the site involved the closure of four USTs and removal of fifteen cubic yards of contaminated soil, an asbestos abatement action, and the removal of four PCB transformers, water from the missile silos, and lead-based paint.

The SR involved the collection of samples from targets near the site. A total of 15 groundwater, sediments and/or surface water samples were collected for the SR and were analyzed for NDMA, pesticides, PCBs, perchlorate, SVOCs, TAL metals, UDMH and/or VOCs.

8.1 Sources

Six source areas were sampled during the 1996 SI, including the former acid fueling station, missile assembly building, maintenance shop, generator building, UST, and missile silo area. Because the site is currently paved, no source samples were collected during SR field activities.

8.2 Targets

Groundwater is used as a drinking water source for 29,928.6 people within 4 miles of the site. None of the groundwater samples had detections of NDMA, perchlorate or UDMH. None of the drinking water samples collected during the 1996 SI had elevated concentrations of contaminants.

Sediment sample PD01SD01 and surface water samples PD01SW01 and CR01SW01 did not have elevated concentrations of any contaminants. Positive results in these target samples are not attributable to the site as they were not also detected in source samples at significant concentrations.

8.3 Conclusions

Results of the SR indicate that FNLS #81 is not contributing to significant concentrations of hazardous substances relative to background concentrations in groundwater and sediments. None of the target samples had elevated concentrations of any contaminant.

- Becker, Frederick, CHMM, Index Environmental Services, Inc., October 2, 1996, letter to Linda Foster, Ecology and Environment, Inc., regarding Water Analysis for Silos; (b) (6) Site, Poulsbo, Washington.
- Bilodeau, Michael, Technical Manager, U.S. Army Corps of Engineers, October, 1996, telephone conversation with Linda Foster, Ecology and Environment, Inc., regarding the former Nike Launch Site #81, Underground storage tank closures.
- Ecology and Environment, Inc. (E & E), June 7, 2006a, Site observations made during the SR sampling event, Mark Woodke, project manager E & E, Inc.
- , March 7, 2006b, START-3 field logbook for the site visit to Former Nike Launch Site #81 Site, Technical Direction Document number 06-01-0035, Ecology and Environment, Inc., Seattle, Washington.
- , 2005, Region 10 START-3 Quality Assurance Project Plan, United States Environmental Protection Agency, Contract number EP-S7-06-02, Seattle, Washington.
- , 1997, SI Report, Former Nike Launch site #81, Poulsbo Washington.
- , September 26, 1996 to October 9, 1996, SI site logbook, Former Nike Launch site #81, Poulsbo Washington.
- ERM Northwest, Inc. (ERM), September 23, 1992, Phase I and Phase II Environmental Site Assessment, Nike Missile Base, Poulsbo, Washington.
- Harza Northwest, Inc. (Harza), Preliminary Geotechnical Engineering Investigation, August 1994, for (b) (6) Development, L.P. Highway 3 and Finn Hill Road (former Nike site), Poulsbo, WA.
- Law Environmental Services (LES), No date provided, The Nike Missile Site Investigation Program.
- Maptech, Inc., 2001, Map of Poulsbo, Washington.

McLeod, R., February 3, 1967, Preliminary Report, Request for Disposal Documents, Sale Parcel No. 1, Portion Army Nike-Ajax Site #81, Poulsbo, Washington, D-Wash-722.

Pittman, Mike, Bangor Naval Sub Base, Public Works Department, March 30, 2006, telephone conversation concerning public water supply well information at the base.

Reynolds, Jill, Facility Supervisor, General Electric Company, June 19, 1996, letter to (b) (6) Associates, L.P., regarding Final Disposal of PCB Materials.

Svarthumle, Keith, Public Works Department, City of Poulsbo, March 8, 2006, Personal communication with Mark Woodke, Ecology & Environment Inc., regarding Former Nike Launch Site #81.

U.S. Army Corps of Engineers (USACE), 1995, Terul Glen, P.E. for Mike Bilodeau, Project Manager, U.S. Army Corps of Engineers, regarding petroleum contaminated soil sampling and determining extent of contamination at the former Nike Missile Launch Site #81, Poulsbo, Washington.

U.S. Army Engineer District (USAED), Defense Environmental Restoration Program, August 16, 1985, Seattle Defense Area Nike Battery #81 (Poulsbo), Kitsap County, Washington.

U.S. Department of Commerce (USDC), Bureau of Commerce, 2000, General Housing Characteristics, Washington State.

——, Bureau of Commerce, 1973, General Housing Characteristics, Washington State.

United States Environmental Protection Agency (EPA), July 2004a, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, OSWER 9240.1-45, EPA 540-R-04-004.

——, March 2004b, USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.3.

——, March 2003, USEPA Contract Laboratory Program Statement of Work for Organic Analyses, OLM04.3.

——, August 2000, Guidance for the Data Quality Objectives Process, EPA QA/G 4, Office of Research and Development, Washington, D.C., EPA/600/R 96/055.

——, October 1999, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, PB 99-963506, EPA 540/R-99/008.

U.S. Federal Emergency Management Agency (FEMA), August 11, 1981, City of Poulsbo Flood Insurance Rate Map, Community Panel # 530241.

- United States Fish and Wildlife Service (USFWS), 1987a, Bremerton East, Washington Quadrangle, 7.5 minute series National Wetland Inventory Map.
- , 1987b, Bremerton West, Washington Quadrangle, 7.5 minute series National Wetland Inventory Map.
- , 1987c, Edmonds West, Washington Quadrangle, 7.5 minute series National Wetland Inventory Map.
- , 1987d, Poulsbo, Washington Quadrangle, 7.5 minute series National Wetland Inventory Map.
- , 1987e, Shilshole Bay, Washington Quadrangle, 7.5 minute series National Wetland Inventory Map.
- Washington State Department of Ecology (Ecology), Well log search, accessed March 20, 2006, Web site <http://apps.ecy.wa.gov/welllog/>.
- Washington State Department of Fish and Wildlife (WDF&W), May 2005, Washington State Sport Catch Report 2001.
- , 1993, Fisheries Statistical Report.
- Western Regional Climate Center (WRCC), September 20, 2006, 1948 to 2005, Monthly Climate Summary, Bremerton, Washington.
- White Shield, Inc. (WSI), March 1993, Closure Assessment Reports, Seattle District Corps of Engineers Camp Hayden (ELWHA), Ollala Nike 62, Kingston Nike 92, Poulsbo Nike 81.
- Wydoski, R.S. and R.R. Whitney, 2003, *Inland Fishes of Washington*, Second Edition. American Fisheries Society, Bethesda, MD in association with University of Washington Press, Seattle. 322 pp.
- (b) (6) March 7, 2006, Personal communication with Mark Woodke, Ecology & Environment Inc., regarding Former Nike Launch Site #81.

A

SAMPLE PLAN ALTERATION FORM

Sample Plan Alteration Form

Project Name and TDD Number: Former Nike Launch Site # 81 06-01-0035

Material to be Sampled:

Sediment

Surface Water

QC Sample

Groundwater

Measurement Parameter: N-nitrosodimethylamine (NDMA), perchlorate, unsymmetrical dimethylhydrazine (UDMH), volatile organic compounds (VOCs), semivolatile organic compounds (SVOC), chlorinated pesticides (pesticides), polychlorinated biphenyls (PCBs), target analyte list (TAL) metals

Standard Procedure for Field Collection and Laboratory Analysis (cite reference):

Sediments, surface water, QC samples, and groundwater samples were collected following Ecology and Environment, Inc., Standard Operating Procedures

Reason for Change in Field Procedure or Analysis Variation: Sediment, surface water, and a trip blank QC sample were added to determine if the surface water pathway was a contamination pathway from the Former Nike Launch Site #81.

Variation from Field or Analytical Procedure: The two sediment samples were analyzed for all parameters listed above. The trip blank was analyzed for VOCs. The three surface water samples were analyzed for all parameters listed above. A rinsate blank sample was not collected as listed in the SQAP as all sampling equipment was dedicated. Two groundwater samples were not collected as listed in the SQAP as property owners denied access to their wells.

Special Equipment, Materials, or Personnel Required: Additional sampling jars (EnCore-type samplers, 8 ounce glass jars, 1-liter polyethylene bottles, 32-ounce amber glass jars, and 40-milliliter glass vials) and preservatives (hydrochloric acid and nitric acid).

Initiator's Name: _____ Date: _____

Project Manager: _____ Date: _____

QA Officer: _____ Date: _____

B

PHOTOGRAPHIC DOCUMENTATION

PHOTOGRAPH IDENTIFICATION SHEET					
CAMERA SERIAL NUMBER: NA				TDD #: 06-01-0035	
LENS TYPE: 35 MM			SITE NAME: FORMER NIKE LAUNCH SITE #81		
Photo #	Direction	Date	Time	By	Description
1-1	South	June 6, 2006	0855	MW	Westside well sample.
1-2	North	June 6, 2006	1000	MW	(b) (6)
1-3	Down	June 6, 2006	1000	MW	(b) (6)
1-4	Down	June 6, 2006	1030	MW	(b) (6)
1-5	Down	June 6, 2006	1040	MW	(b) (6)
1-6	Down	June 6, 2006	1050	MW	Wal-Mart well.
1-7	Down	June 6, 2006	1130	MW	Accumar Corp. sample collection.
1-8	Down	June 6, 2006	1300	MW	(b) (6)
1-9	North	June 6, 2006	1330	MW	(b) (6)
1-10	Down	June 6, 2006	1450	MW	Johnson Creek sample location.
1-11	Down	June 6, 2006	1520	MW	Pond #2 sample location.
1-12	Down	June 6, 2006	1520	MW	Pond #1 sample location.

Key:

MW = Mark Woodke.



Photo 1-1



Photo 1-2



Photo 1-3

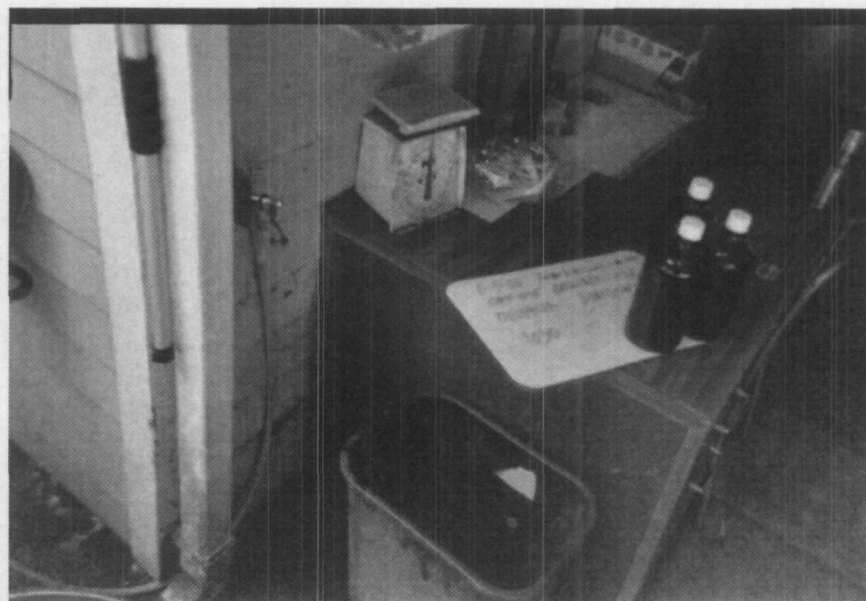


Photo 1-4



Photo 1-5



Photo 1-6



Photo 1-7

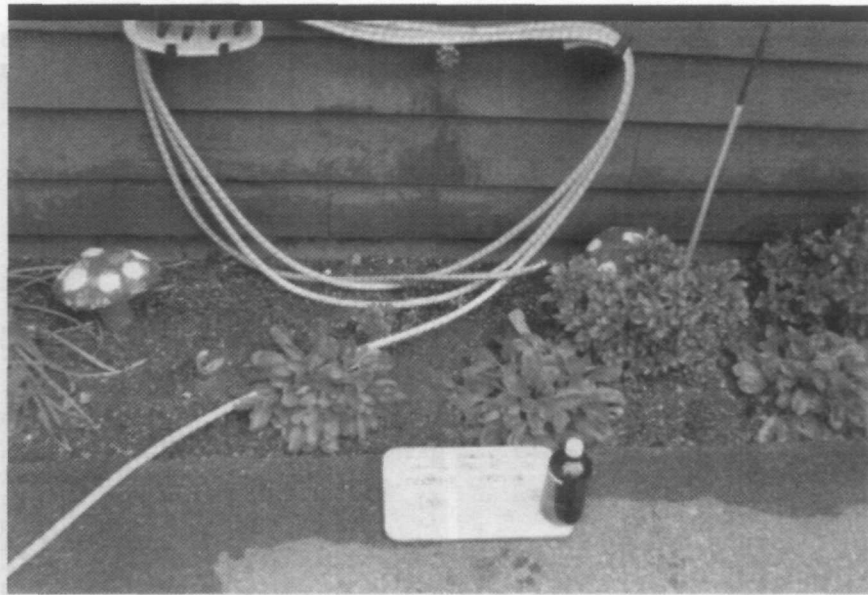


Photo 1-8



Photo 1-9



Photo 1-10



Photo 1-11



Photo 1-12

C

DATA VALIDATION MEMORANDA



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: August 30, 2006

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Summary Check, Former Nike Launch Site #81 Site, Poulsbo, Washington**

REF: TDD: 06-01-0035 PAN: 002233.0051.01SR

The data quality assurance review of 3 water and 2 soil samples collected from the Former Nike Launch Site #81 site in Poulsbo, Washington, has been completed. Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), Chlorinated Pesticides (Pesticides) and Polychlorinated Biphenyls (PCBs) analyses (EPA CLP SOW SOM01.1) were performed by Datachem Laboratories, Inc., Utah.

The samples were numbered:

J73T9 J73W0 J73W2 J73W3 J73W7

No discrepancies were noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

August 28, 2006

MEMORANDUM

SUBJECT: Data validation report for the volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides (PEST), and PCB Aroclors (PCB) analysis of samples from the Former Nike Launch Site #81
Case: 35417 SDG: J73T9

FROM: Brandon Perkins, QA Chemist *BP*
Office of Environmental Assessment

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup

CC: Mark Woodke
Ecology and Environment

The quality assurance (QA) review of 3 water and 2 soil samples collected from the above referenced site has been completed. The samples were analyzed for VOCs, SVOCs, Pesticides, and PCB Aroclors in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Multi-Concentration Organic Analysis (SOM01.1). The analysis was performed by Datachem Laboratories of Salt Lake City, UT. The following samples were reviewed in this validation report:

SDG: J73T9

J73T9 J73W0 J73W2 J73W3 J73W7

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control (QC) Specifications outlined in the USEPA CLP SOW for Multi Concentration Organic Analysis (SOM01.1) and the USEPA CLP National Functional Guidelines for Organic Data Review (1/2005).

The conclusions presented herein are based on the information provided for the review.

Holding Time -

All of the samples met the technical holding time criteria for VOCs, SVOCs, pesticide, and PCB Aroclors analysis. The samples were collected on 6/6/06, VOCs analysis occurred on 6/13/06 – 6/14/06, SVOCs, Pest, and PCB extraction occurred on 6/13/06 & 6/15/06; SVOCs analysis occurred on 6/19/06 – 6/21/06, PEST analysis occurred on 6/26/06, and PCB analysis occurred on 6/21/06. SVOC samples were re-extracted and re-analyzed on 6/26/06, outside of holding time due to spiking of incorrect surrogates. None of the data was qualified on this basis.

Instrument Performance Checks – Acceptable

The GC/MS systems used for VOCs and SVOCs analysis met the performance checks and ion abundance criteria. All of the samples were analyzed within an acceptable 12-hour QC period and the instruments used remained stable throughout the course of analyses. None of the data were qualified on this basis.

The GC system used in the Pest analysis met the performance checks, resolution checks, and percent endrin and 4,4'-DDT breakdown criteria. All of the samples were analyzed within an acceptable 12-hour QC period and the instrument used remained stable throughout the course of analysis. None of the data was qualified on this basis.

Initial Calibrations (ICAL) -

The ICAL curves for VOCs and SVOCs analysis met the technical acceptance criteria set forth by the SOW for the percent relative standard deviations (%RSDs), chromatographic resolutions, retention times, and minimum response factors (RRFs) for all target compounds and surrogates with the following exceptions:

- VOC ICAL 5/23/06 instr. 5972-P - The mean RRF of 1,4-Dioxane (0.0013) exceeded the control limit of 0.010. This compound was not detected and therefore was qualified unusable "R".
- VOC ICAL 5/11/06 instr. 5972-S - The mean RRF of 1,4-Dioxane (0.0025) exceeded the control limit of 0.010. This compound was not detected and therefore was qualified unusable "R".

The ICAL curves for Pest analysis met the frequency of analysis and other technical acceptance criteria set forth by the SOW for the percent relative standard deviations (%RSDs), retention times, and calibration factors (CFs) for all target compounds and surrogates.

The initial calibration curves for PCBs analysis met the frequency of analysis and other technical acceptance criteria set forth by the SOW for the percent relative standard deviations (%RSDs), retention times, and calibration factors (CFs) for all target compounds and surrogates.

Continuing Calibration Verification (CCV)

All of the GC/MS CCVs for VOCs and SVOCs analysis met the criteria for frequency of analysis, and the technical acceptance criteria (minimum response factors (RFs) and percent differences (%Ds)) with the following exceptions:

Date/Time of Analysis	Compound	%D (25% limit)	Qualifier Detect/Non-detect	Associated Samples
6/26/06 13:20 instr. 5972-R	Hexachlorocyclopentadiene 4-Nitrophenol Pentachlorophenol	26.9 27.2 37.4	J/None J/None J/None	J73T9RX, J73W1RX, J73W3RX

All of the GC CCVs for Pest analysis met the criteria for frequency of analysis, retention times, and percent differences (%Ds) of the technical acceptance criteria. None of the data was qualified on this basis.

All of the GC CCVs for PCBs analysis met the criteria for frequency of analysis, retention times, and percent differences (%Ds) of the technical acceptance criteria. None of the data was qualified on this basis.

Quantitation Limits - Acceptable

The samples were analyzed at the contract required quantitation limits (CRQL). The CRQLs were based on the lowest standard concentration analyzed in the initial calibrations. Target compounds that were detected at concentrations less than the QLs were qualified as estimated, "J". Detected compounds at concentrations over the calibration range were analyzed by the laboratory at a dilution. Trace levels of common laboratory contaminants detected in the samples at concentrations less than CRQLs were qualified by the reviewer as non-detect, "U" and reported at the CRQL. All of the reported results were adjusted for sample amounts analyzed. When applicable, all of the "E" and "D" qualifiers applied by the laboratory were crossed-out by the reviewer.

It is recommended that data users should utilize the results/analytical run selected by the reviewer where more than one analysis was performed on a single extract (i.e., dilution, re-analysis).

Blanks - Acceptable

All method and/or instrument blanks analyzed for VOCs, SVOCs, Pest, and PCBs were acceptable with the following exceptions

- ▶ Trace levels of methylene chloride was detected in the one of the method blanks. This compound is a common laboratory contaminant. Therefore detected methylene chloride at concentrations less than 10x the blank value, within samples associated with this blanks, were qualified as non-detects, "U".
- ▶ Trace levels of toluene was detected in the full scan method blank. Detected toluene concentrations less than 5x the blank values, within samples associated with this blank was qualified as non-detects, "U".
- ▶ Trace levels of bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and di-n-butylphthalate were detected in one of the method blanks. These compounds are common laboratory contaminants. Therefore detected bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and di-n-butylphthalate at concentrations less than 10x the blank value, within samples associated with this blank, were qualified as non-detects, "U".
- ▶ Trace levels of acetphenone was detected in one of the method blanks. Detected acetphenone at concentrations less than 5x the blank values, within samples associated with this blank was qualified as non-detects, "U".
- ▶ Trace levels of methoxychlor was detected in one of the method blanks. Detected methoxychlor at concentrations less than 5x the blank values, within samples associated with this blank was qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples, and QC samples were analyzed in accordance with the SOW specified analytical sequence. None of the data was qualified on this basis.

Surrogates

Fourteen VOCs, Eighteen SVOCs and two Pest/PCB surrogates were spiked in all the samples and QC samples to evaluate laboratory performance. The surrogates and their corresponding recovery acceptance limits are:

DMCs	Recovery Limits (%)	DMCs	Recovery Limits (%)
Vinyl Chloride-d3 (VCL)	65-131	1,2-Dichloropropane-d6 (DPA)	79-124
Chloroethane-d5 (CLA)	71-131	Toluene-d8 (TOL)	77-121
1,1-Dichloroethene-d2 (DCE)	55-104	Trans-1,3-Dichloropropene-d4 (TDP)	73-121
2-Butanone-d5 (BUT)	49-155	2-Hexanone-d5 (HEX)	28-135
Chloroform-d (CLF)	78-121	1,4-Dioxane-d8 (DXE)	50-150
1,2-Dichloroethane-d4 (DCA)	78-129	1,1,2,2-Tetrachloroethane-d2 (TCA)	73-125
Benzene-d6 (BEN)	77-124	1,2-Dichlorobenzene (DCZ)	80-131
Phenol-d5 (PHL)	17-103	Dimethylphthalate-d6 (DMP)	43-111
Bis-(2-chloroethyl)ether-d8 (BCE)	12-98	Acenaphthylene-d8 (ACY)	20-97
2-Chlorophenol-d4 (2CP)	13-101	4-Nitrophenol-d4 (4NP)	16-166
4-Methylphenol-d8 (4MP)	8-100	Fluorene-d10 (FLR)	40-108
Nitrobenzene-d5 (NBZ)	16-103	4,6-Dinitro-2-methylphenol-d2 (NMP)	1-121
2-Nitrophenol-d4 (2NP)	16-104	Anthracene-d10 (ANC)	22-98
2,4-Dichlorophenol-d3 (DCP)	23-104	Pyrene-d10 (PYR)	51-120
4-Chloroaniline-d4 (4CA)	1-145	Benzo(a)pyrene-d12 (BAP)	43-111
Fluoranthene-d10 (SIM) (FLN)	50-150	2-Methylnaphthalene-d10 (SIM) (2MN)	50-150
Tetrachloro-m-xylene (TCX)	30-150	Decachlorobiphenyl (DCB)	30-150

All of the surrogate recoveries met the applicable recovery criteria with the following exceptions:

Sample	DMC	Recovery (%)	Qualification Detects/Non-detects	Associated compounds
J73T9	DXE	180	J/None	1,4-Dioxane
J73W3	DXE	112	J/None	1,4-Dioxane
J73W7	DXE	106	J/None	1,4-Dioxane

J73T9	NBZ	125	J/None	Acetophenone, N-nitroso-di-n-propylamine, Hexachloroethane, Nitrobenzene, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, N-Nitrosodiphenylamine
J73W1	PHL	131	J/None	Benzaldehyde, Phenol
	NBZ	151	J/None	Acetophenone, N-nitroso-di-n-propylamine, Hexachloroethane, Nitrobenzene, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, N-Nitrosodiphenylamine
J73W3	PHL	133	J/None	Benzaldehyde, Phenol
	NBZ	134	J/None	Acetophenone, N-nitroso-di-n-propylamine, Hexachloroethane, Nitrobenzene, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, N-Nitrosodiphenylamine

Due to laboratory error SVOC surrogates were spiked incorrectly for samples J73T9, J73W1, and J73W3. The spiking solution only contained the surrogates NBZ and PHL which accounts for zero percent recovery of other surrogates. The laboratory re-extracted the affected samples with the corrected surrogates and all of the surrogates were recovered within limits. None of the data was qualified on this basis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) –

Sample J73W3 was designated for MS/MSD analysis. The MS/MSD analysis met the advisory technical acceptance criteria for percent recovery (%R) and relative percent difference (RPD) with the following exceptions:

Compound (Re-extract)	MS %R	MSD %R	Control Limits	RPD	Control Limits
4-Nitrophenol	122*	98*	10-80	22	50
2,4-Dinitrophenol	106*	76	24-96	33	38
Pentachlorophenol	123*	96	9-103	25	50

*outside of control limits

None of the data was qualified on this basis.

Compound	MS %R (Column 1)	MS %R (Column 2)	MSD %R (Column 1)	MSD %R (Column 2)	Control Limits	RPD (Column 1)	RPD (Column 2)	Control Limits
Gamma-BHC	86	90	67	66	56-123	25*	30*	15
Heptachlor	93	96	74	75	40-131	22*	24*	20
Aldrin	93	98	74	75	40-120	23*	26*	22
Dieldrin	99	103	76	77	52-126	26*	29*	18
Endrin	102	112	78	83	56-121	27*	29*	21
4,4'-DDT	102	106	74	77	38-127	30*	31*	27

*outside of control limits

None of the data was qualified on this basis.

Laboratory Control Sample (LCS) - Acceptable

The LCS analysis met the advisory technical acceptance criteria for percent recovery (%R). None of the data was qualified on this basis.

Internal Standards -

The acceptance criteria for internal standards (IS) are ± 30 seconds for retention time (RT) shifts and -50% to +200% of the IS area as compared to the IS RT and area of the daily continuing calibration standard. The internal standards are:

1,4-Difluorobenzene (DFB)	Chlorobenzene-d5 (CBZ)
1,4-Dichlorobenzene-d4 (DCB)	Naphthalene-d8 (NPT)
Acenaphthene-d10 (ANT)	Phenanthrene-d10 (PHN)
Chrysene-d12 (CRY)	Perylene-d12 (PRY)

All of the results met the IS area and RT shift criteria. None of the data was qualified on this basis.

Florisil Cartridge Check - Acceptable

The frequency of analysis and recovery criteria of florisil used during pests/PCB clean-up were met. None of the data were qualified on this basis.

Gel Permeation Chromatography (GPC) Check - Acceptable

The frequency of analysis and recovery criteria of GPC used during pests/PCB clean-up was met. None of the data was qualified on this basis.

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows, met the USEPA spectral matching criteria and were judged to be acceptable except for the following situation: Detected compounds with results below the CRQL and that had weak spectra were qualified as non-detected and reported at the CRQL level by the reviewer.

Pesticide and PCB Aroclors were calculated for both primary (CLP-Pest I) and confirmatory (CLP-Pest II) columns. The reviewer used professional judgement during the final identification and qualification of the single component pesticides and Aroclors. Detected pesticides and Aroclors with %Ds >30% but <60% between the two column concentrations were qualified estimated, "J". The lower of the two concentrations were reported on the Form Is. Detected pesticides and Aroclors at concentration <CRQLs with %Ds >60% between two columns were qualified non-detects, "U" with the reporting limits elevated to the CRQL level.

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and in the associated method blank(s) were crossed-out by the reviewer. Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were also

crossed-out by the reviewer and qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "JN", tentatively identified at the estimated concentration.

Laboratory Contact

The laboratory was contacted and asked to resubmit forms with discrepancies.

Overall Assessment

The total number of data points was 745. Less than 1% of the total data points were qualified non-detect due to VOCs mass spectra which did not meet spectra matching criteria. Less than 1% of the total data points were qualified non-detects due to VOCs blank contamination. Less than 1% of the total data points were qualified unusable due to exceedances in VOC calibration criteria. 1% of the total data points were qualified non-detects due to SVOCs blank contamination. Less than 1% of the total data points were qualified non-detects due to exceedances in Pest primary and confirmatory column concentrations. Less than 1% of the total data points were qualified non-detects due to Pest blank contamination.

All of the samples were analyzed in accordance with technical specifications outlined in the SOW. The data, as qualified, are acceptable and can be used for all purposes.

Data Qualifiers		
	U	The analyte was not detected at or above the reported result.
	J	The analyte was positively identified. The associated numerical result is an estimate.
	UJ	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
	R	The data are unusable for all purposes.
	N	There is evidence the analyte is present in this sample.
	JN	There is evidence that the analyte is present. The associated numerical result is an estimate.
Bias Qualifiers	L	Low bias.
	H	High bias.
	Q	The result is estimated because the concentration is below the Contract Required Quantitation Limits (CRQLs).
	K	Unknown Bias

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD87C709
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. _____ Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	SR

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATA

Case No.: 35417

Mod. Ref No.: _____

SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: 06C02709

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: PD87C709

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. _____

Date Analyzed: 06/13/2006

GC Column: DB624

ID: 0.53

(mm)

Dilution Factor: 1.0

Soil Extract Volume: _____

(uL)

Soil Aliquot Volume: _____

(uL)

Purge Volume: 5.0

(mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-92-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

BP 6/25/06

[Signature]
SOM01.1 (5/2009)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATA Case No.: 35417

Mod. Ref No.: _____ SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: 06C02709

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: PD87C709

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. _____

Date Analyzed: 06/13/2006

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

BL 8/28/00
[Signature]
SOM01.1 (5/2000)

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 5.87 (g/mL) g Lab File ID: SE31C710
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 14 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	40	
75-15-0	Carbon disulfide	5.0 2.54	SA
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0 2.57	SA
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	19	
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	SR

BP
8/22/06 *myjanta*

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 5.87 (g/mL) g Lab File ID: SE31C710
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 14 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	1.2	JQ ✓
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0 0.12	7U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0 0.39	8U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0 0.25	7U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

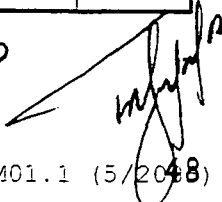
EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref. No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 5.87 (g/mL) g Lab File ID: SE31C710
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 14 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

BP 8/28/00

 SOM01.1 (5/2008)

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 5.90 (g/mL) g Lab File ID: SE32C712
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 25 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
75-71-8	Dichlorodifluoromethane	5.6	U
74-87-3	Chloromethane	5.6	U
75-01-4	Vinyl chloride	5.6	U
74-83-9	Bromomethane	5.6	U
75-00-3	Chloroethane	5.6	U
75-69-4	Trichlorofluoromethane	5.6	U
75-35-4	1,1-Dichloroethene	5.6	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.6	U
67-64-1	Acetone	26	✓
75-15-0	Carbon disulfide	5.6	U
79-20-9	Methyl acetate	5.6	U
75-09-2	Methylene chloride	5.6 5.6	U U
156-60-5	trans-1,2-Dichloroethene	5.6	U
1634-04-4	Methyl tert-butyl ether	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U
156-59-2	cis-1,2-Dichloroethene	5.6	U
78-93-3	2-Butanone	24	✓
74-97-5	Bromochloromethane	5.6	U
67-66-3	Chloroform	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U
110-82-7	Cyclohexane	5.6	U
56-23-5	Carbon tetrachloride	5.6	U
71-43-2	Benzene	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U
123-91-1	1,4-Dioxane	110	✓ R

BP 8/28/06

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
Sample wt/vol: 5.90 (g/mL) g Lab File ID: SE32C712
Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
% Moisture: not dec. 25 Date Analyzed: 06/14/2006
GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
79-01-6	Trichloroethene	5.6	U
108-87-2	Methylcyclohexane	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U
75-27-4	Bromodichloromethane	5.6	U
10061-01-5	cis-1,3-Dichloropropene	5.6	U
108-10-1	4-Methyl-2-Pentanone	11	U
108-88-3	Toluene	5.6 2.18	U <i>TU</i>
10061-02-6	trans-1,3-Dichloropropene	5.6	U
79-00-5	1,1,2-Trichloroethane	5.6	U
127-18-4	Tetrachloroethene	5.6	U
591-78-6	2-Hexanone	11	U
124-48-1	Dibromochloromethane	5.6	U
106-93-4	1,2-Dibromoethane	5.6	U
108-90-7	Chlorobenzene	5.6	U
100-41-4	Ethylbenzene	5.6	U
95-47-6	o-Xylene	5.6	U
179601-23-1	m,p-Xylene	5.6 0.21	U <i>TU</i>
100-42-5	Styrene	5.6	U
75-25-2	Bromoform	5.6	U
98-82-8	Isopropylbenzene	5.6	U
79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
541-73-1	1,3-Dichlorobenzene	5.6	U
106-46-7	1,4-Dichlorobenzene	5.6	U
95-50-1	1,2-Dichlorobenzene	5.6	U
96-12-8	1,2-Dibromo-3-chloropropane	5.6	U
120-82-1	1,2,4-Trichlorobenzene	5.6	U
87-61-6	1,2,3-Trichlorobenzene	5.6	U

8/23/06

SOM01.1 (5/20/58)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____

SDG No.: J73T9

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: 06C02712

Sample wt/vol: 5.90 (g/mL) g

Lab File ID: SE32C712

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. 25

Date Analyzed: 06/14/2006

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

BD 8/25/06

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATA

Case No.: 35417

Mod. Ref No.: _____

SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: 06C02713

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: PD88C713

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. _____

Date Analyzed: 06/13/2006

GC Column: DB624

ID: 0.53

(mm)

Dilution Factor: 1.0

Soil Extract Volume: _____

(uL)

Soil Aliquot Volume: _____

(uL)

Purge Volume: 5.0

(mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	NR

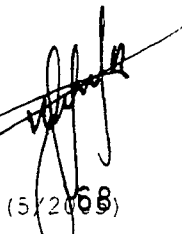
1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD88C713
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

BE
8/28/06

 SOM01.1 (5/2008)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATA

Case No.: 35417

Mod. Ref No.: _____

SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: 06C02713

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: PD88C713

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. _____

Date Analyzed: 06/13/2006

GC Column: DB624

ID: 0.53

(mm)

Dilution Factor: 1.0

Soil Extract Volume: _____

(uL)

Soil Aliquot Volume: _____

(uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

Purge Volume: 5.0

(mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

8/23/06

SOM01.1 (5/2009)

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W7

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02714
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD89C714
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. _____ Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	✓R

Handwritten: 8/25/06

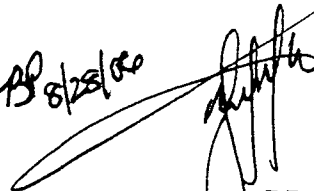
1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W7

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02714
Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD89C714
Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
% Moisture: not dec. Date Analyzed: 06/13/2006
GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

AP 8/28/06

SOM01.1 (6/2003)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W7

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATA Case No.: 35417

Mod. Ref No.: _____ SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: 06C02714

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: PD89C714

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. _____

Date Analyzed: 06/13/2006

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	115-07-1	Propene	3.05	6.5	JN
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

SP 6/28/06
[Signature]
SOM01.1 (5/2008)

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026

Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709

Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG04C09

Level: (LOW/MED) LOW Extraction: (Type) CONT

% Moisture: Decanted: (Y/N) Date Received: 06/08/2006

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006

Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use this run

BP 8/25/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG04C09
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹ Cannot be separated from Diphenylamine

Use this run

11/8/2006

SOM01.1 (5/252)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG04C09
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	18	JB
02		Unsaturated Hydrocarbon	4.17	2.6	JB
03	321-60-8	1,1'-Biphenyl, 2-fluore	7.73	31	TWB
04	118-79-6	Phenol, 2,4,6-tribromo	10.25	42	JNB
05	1718-51-0	p-Terphenyl-ol4	14.27	48	JNB
06	100022-00-0	6,8-Dodecadien-1-ol (6Z,8Z)	15.28	2.3	JN
07		Polycyclic Hydrocarbon	18.92	10	JB
08		Polycyclic Hydrocarbon	24.30	11	JB
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

BP 8/28/06

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9PX

Lab Name: DataChem Laboratories, Inc.Contract: EP-W-05-026Lab Code: DATA CCase No.: 35417

Mod. Ref No.: _____

SDG No.: J73T9Matrix: (SOIL/SED/WATER) WATERLab Sample ID: 06C02709R1Sample wt/vol: 1000 (g/mL) mLLab File ID: RNS09C09Level: (LOW/MED) LOWExtraction: (Type) CONT% Moisture: _____ Decanted: (Y/N) NDate Received: 06/08/2006Concentrated Extract Volume: 1000 (uL)Date Extracted: 06/23/2006Injection Volume: 1.0 (uL) GPC Factor: _____Date Analyzed: 06/26/2006GPC Cleanup: (Y/N) N pH: _____Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use first run

BP 8/28/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS09C09
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 2.2	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

use first run

11/8/06

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73T9RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS09C09
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown oxyhydrocarbon	4.53	5.7	JB
02		Polycyclic hydrocarbon	18.87	4.8	JB
03		Polycyclic hydrocarbon	24.24	3.9	JB
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATAC

Case No.: 35417

Mod. Ref No.:

SDG No.: J73T9

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: 06C02710

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: RNJ14C10

Level: (LOW/MED) LOW

Extraction: (Type) SONC

% Moisture: 14 Decanted: (Y/N) N

Date Received: 06/08/2006

Concentrated Extract Volume: 500 (uL)

Date Extracted: 06/14/2006

Injection Volume: 1.0 (uL) GPC Factor: 2.0

Date Analyzed: 06/21/2006

GPC Cleanup: (Y/N) Y pH: 6.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl) ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	390	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	390	U
83-32-9	Acenaphthene	200	U

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ14C10
 Level: (LOW/MED) LOW Extraction: (Type) SONC
 % Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
 Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
 GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
51-28-5	2,4-Dinitrophenol	390	U
100-02-7	4-Nitrophenol	390	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	390	U
534-52-1	4,6-Dinitro-2-methylphenol	390	U
86-30-6	N-Nitrosodiphenylamine ¹	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	390	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	200 180	U BU
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

¹Cannot be separated from Diphenylamine

AP 8/28/06
SOM01.1 (5/2006)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ14C10
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	490	JB
02		Polycyclic hydrocarbon	18.90	120	J
03	56881-08-4	7-Hydroxy-3-(1,1-dimethylprop-2-enyl)cou	20.39	88	JN
04	100014-97-0	Ledene oxide-(II)	23.40	79	JN
05		Polycyclic hydrocarbon	24.31	93	J
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG05C11
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

use this run

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026

Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711

Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG05C11

Level: (LOW/MED) LOW Extraction: (Type) CONT

% Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006

Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/19/2006

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	0.23	JQ
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	0.48	JQ
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	0.59	JQ
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 0.68	U U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

Use this run

8/20/06

SOM01.1 (5/288)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG05C11
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	24	JB
02		Unsaturated Hydrocarbon	4.16	3.9	JB
03	321-60-8	1,1'-Biphenyl, 2-fluoro-	7.72	87	JNB
04	118-79-6	Phenol, 2,4,6-tribromo-	10.24	49	JNB
05	1718-51-0	p-Terphenyl-d14	14.28	61	JNB
06		Polycyclic hydrocarbon	18.91	8.5	JB
07		Polycyclic hydrocarbon	24.30	9.1	JB
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711R1
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS10C11
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: _____ Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
 Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/26/2006
 GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use first run

8/28/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS10C11
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 2.2	BU
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹ Cannot be separated from Diphenylamine.

Use first run

SOM01.1 (5/2003)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W1RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS10C11
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

BP 8/22/06

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
01		Unknown oxyhydrocarbon	4.53	11	JB
02		Polycyclic hydrocarbon	18.88	20	JB
03		Polycyclic hydrocarbon	24.24	25	JB
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

BP 8/25/06

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ15C12
 Level: (LOW/MED) LOW Extraction: (Type) SONC
 % Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
 Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
 GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	230	U
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl) ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	110	JQ
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	230	U

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ15C12
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
132-64-9	Dibenzofuran	230	U
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamine ¹	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-81-7	Bis(2-ethylhexyl)phthalate	230 110	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U
58-90-2	2,3,4,6-Tetrachlorophenol	230	U

¹Cannot be separated from Diphenylamine

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ15C12
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Polycyclic hydrocarbon	18.92	180	J
02		Polycyclic hydrocarbon	24.28	140	J
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

tl 8/28/06

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG06C13
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use this run

Handwritten signature/initials

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG06C13
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	0.57	JQ
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	3.1	JQ
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 0.86	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

use this run

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG06C13
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	19	JB
02		Unsaturated Hydrocarbon	4.16	2.8	JB
03	321-60-8	1,1'-Biphenyl, 2-fluoro-	7.72	78	JNB
04	118-79-6	Phenol, 2,4,6-tribromo-	10.24	50	JNB
05	1718-51-0	p-Terphenyl-d14	14.28	48	JNE
06		Polycyclic hydrocarbon	18.91	4.2	JB
07		Polycyclic hydrocarbon	24.31	4.7	JE
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS06C13
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/20/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use first run

8/28/06

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3RX

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATAC

Case No.: 35417

Mod. Ref No.:

SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: 06C02713R1

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: RNS06C13

Level: (LOW/MED) LOW

Extraction: (Type) CONT

% Moisture: Decanted: (Y/N) N

Date Received: 06/08/2006

Concentrated Extract Volume: 1000 (uL)

Date Extracted: 06/20/2006

Injection Volume: 1.0 (uL) GPC Factor:

Date Analyzed: 06/26/2006

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 0.43	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
56-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

use first run.

SOM01.1 (5/2007)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W3RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS06C13
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/20/2006
Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	3.95	5.4	J
02		Unknown oxyhydrocarbon	4.53	2.1	JB
03		Polycyclic hydrocarbon	18.87	17	JB
04		Polycyclic hydrocarbon	24.23	26	JB
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A	19	J

²EPA-designated Registry Number.

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
Sample wt/vol: 1000 (g/mL) mL Lab File ID: 21060625A050,21060625B050
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Extraction: (Type) SEPF Date Extracted: 06/13/2006
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	<u>Q</u>
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.0014	JQ
76-44-8	Heptachlor	0.0025	JQ
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10 0.0020	JPU
72-20-8	Endrin	0.0016	JQ
33213-65-9	Endosulfan II	0.10 0.0019	JPU
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.0049	JQ
50-29-3	4,4'-DDT	0.10 0.0030	JPU
72-43-5	Methoxychlor	0.50 0.10	JPU
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10 0.011	JPU
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U

BP
8/28/06

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: 21060625A057, 21060625B057
 % Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
 Extraction: (Type) SONC Date Extracted: 06/15/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	0.042	J/Q
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	3.9	U
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	3.9	U
72-43-5	Methoxychlor	20 1.6	25 U
53494-70-5	Endrin ketone	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U

BP
8/20/06

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: 21060625A051, 21060625B051
 % Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006
 Extraction: (Type) SEPF Date Extracted: 06/13/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: _____ Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
319-84-6	alpha-BHC	0.05 0.0022	PU
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.05 0.0033	PU
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.0021	JQ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10 0.0084	PU
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10 0.0027	PU
50-29-3	4,4'-DDT	0.10 0.0068	PU
72-43-5	Methoxychlor	0.50 0.079	PU
53494-70-5	Endrin ketone	0.10 0.0028	PU
7421-93-4	Endrin aldehyde	0.10 0.010	PU
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U

BP 8/28/06

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: 21060625A058, 21060625B058
 % Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
 Extraction: (Type) SONC Date Extracted: 06/15/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	2.3	U
76-44-8	Heptachlor	2.3	U
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
959-98-8	Endosulfan I	2.3	U
60-57-1	Dieldrin	4.4	U
72-55-9	4,4'-DDE	4.4	U
72-20-8	Endrin	4.4	U
33213-65-9	Endosulfan II	4.4	U
72-54-8	4,4'-DDD	4.4	U
1031-07-8	Endosulfan sulfate	4.4	U
50-29-3	4,4'-DDT	4.4	U
72-43-5	Methoxychlor	23 1.6	U
53494-70-5	Endrin ketone	4.4	U
7421-93-4	Endrin aldehyde	4.4	U
5103-71-9	alpha-Chlordane	2.3	U
5103-74-2	gamma-Chlordane	2.3	U
8001-35-2	Toxaphene	230	U

BP 8/22/06

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: 21060625A052, 21060625B052
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Extraction: (Type) SEPF Date Extracted: 06/13/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.0022	J/Q
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.05 0.0012	SPU
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10 0.0073	SPU
72-43-5	Methoxychlor	0.50 0.035	SPU
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10 0.0063	SPU
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U

BP 6/28/06

1H - FORM I ARO
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: 19060620A020,19060620B020
 % Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006
 Extraction: (Type) SEPF Date Extracted: 06/13/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
 Injection Volume: 2.0 (uL) GPC Factor: _____ Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N
 Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

BP
 8/23/00

1H - FORM I ARO
AROCOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19060620A028,19060620B028
 % Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
 Extraction: (Type) SONC Date Extracted: 06/14/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
 Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N
 Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

SD
8/25/06

1H - FORM I ARO
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: 19060620A021,19060620B021
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Extraction: (Type) SEPF Date Extracted: 06/13/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
 Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N
 Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

BP
8/25/06

1H - FORM I ARO
AROCOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19060620A029,19060620B029
% Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
Extraction: (Type) SONC Date Extracted: 06/14/2006
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N
Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

8/25/06

1H - FORM I ARO
AROCOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
Sample wt/vol: 1000 (g/mL) mL Lab File ID: 19060620A022,19060620B022
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Extraction: (Type) SEPF Date Extracted: 06/13/2006
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N
Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

7/28/00



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: July 28, 2006

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Summary Check, Former Nike Launch Site #81,
Poulsbo, Washington**

REF: TDD: 06-01-0035

PAN: 002233.0051.01SR

The data summary check of 12 water and two sediment samples collected from the Former Nike Launch Site #81 in Poulsbo, Washington, has been completed. Perchlorate analyses were performed by the Manchester Environmental Laboratory (MEL), Port Orchard, Washington.

The samples were numbered:

06234050	06234051	06234052	06234053	06234054	06234055
06234056	06234057	06234061	06234062	06234063	06234064
06234065	06234066				

No discrepancies were noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY

7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for Perchlorate Results from the USEPA Region 10 Laboratory

PROJECT NAME: Former Nike Launch Site

PROJECT CODE: TEC-877A

FROM: Gerald Dodo, Chemistry Supervisor
USEPA Region 10 Laboratory

TO: Ken Marcy, Project Manager
Office of Environmental Cleanup, USEPA Region 10

CC: Mark Woodke, Ecology and Environment, Inc.
mwoodke@ene.com

I have authorized release of this data package. Attached you will find the perchlorate results for the Former Nike Launch Site project samples received 06/07/2006. For further information regarding the attached data, contact Isa Chamberlain at (360)871-8706.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

DATE: July 18, 2006

TO: Ken Marcy, Project Manager
Office of Environmental Cleanup, Site Cleanup Unit 2, USEPA Region 10

FROM: Stephanie Le, Chemist
Office of Environmental Assessment, USEPA Region 10 Laboratory

CC: Mark Woodke, Ecology and Environment, Inc.
mwoodke@ene.com

SUBJECT: Data Review of the Perchlorate Analysis for Former Nike Launch Site #81 samples
Project Code: TEC-877A
Account Code: 06T1P302DD2C10ZZLA00

The following is a data review of the perchlorate analyses of twelve water samples and two sediment samples from the Former Nike Launch Site #81 project. The analyses were performed by EPA chemists at the USEPA Region 10 Laboratory in Port Orchard, WA, following USEPA and Laboratory guidelines.

This review was conducted for the following samples:

Water Samples

06234050	06234051	06234052	06234053	06234055	06234057
06234061	06234062	06234063	06234064	06234065	06234066

Sediment Samples

06234054	06234056
----------	----------

Data Qualifications

The following comments refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, and the QAPP. The qualifications recommended herein are based on the information provided for the review. For those tests for which the USEPA Region 10 Laboratory has been NELAC accredited, all requirements of the current NELAC Standard have been met.

1.0 Perchlorate – Acceptable

The holding time from the date of collection until the date of analysis for perchlorate is 28 days. The samples were collected on 06/06/2006 and the perchlorate analysis was conducted on 06/14/2006 and 06/15/2006. The holding time criterion was met for all samples.

Although the scope of EPA Method 314.0 does not cover sediments, it can be applied to this matrix by extracting 5g of soil with 50mL reagent water. Therefore, the sample and corresponding quality control samples were mixed with reagent water on 06/14/2006 and allowed to sit overnight prior to filtration and analysis. Water samples were also filtered prior to analysis, as specified by the Method. The conductivity of all sediment extracts and water samples was measured and the

results were below the instrument MCT. No sample pretreatment was required. All sample preparation was in accordance with USEPA Region 10 Laboratory protocols. No qualification of the data was required based on sample preparation.

The water samples and sediment extracts were analyzed for perchlorate using EPA Method 314.0. The instrument was calibrated on 06/12/2006. The calibration was performed according to the method using a series of standards, with the lowest standard at the concentration of the minimum reporting limit (MRL). The calibration curve was linear and yielded a correlation coefficient greater than 0.995. Calibration verification standards are required before and after sample analysis and after every ten samples during analysis. The recoveries must be within 85-115% for a midrange standard, and within 75-125% for a standard at the MRL. All appropriate calibration verification checks met the recovery criteria.

A standard at the instrument-determined Maximum Conductivity Threshold (MCT) must be analyzed as the initial sample to prove the instrument analysis can detect perchlorate in a sample with a mixed common anion matrix up to the MCT. Recovery met the acceptance criterion of 80-120% of the standard's true value. The conductivity of the standard was verified to be within 10% of the MCT prior to analysis.

Laboratory control samples are prepared and analyzed along with the project samples to verify the efficiency of the laboratory procedures. All laboratory control sample results met the recovery acceptance criterion of 90-110% of the standard's true value.

Procedural blanks were prepared with the samples to show potential contamination from the analytical procedure. The results from the blank analyses are required to be less than the MRL. The procedural blank did not contain detectable levels of perchlorate.

Duplicate analysis was performed on samples 06234051, 06234056, 06234057, and 06234062. Relative Percent Difference (RPD) was not calculated because the results were less than five times the MRL. However, the RPD met the requirement of 20% when calculated for the Matrix Spike and Matrix Spike Duplicate.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) sample analyses are performed to provide information about the effect of the sample matrix on the analytical method. MS/MSD analysis was performed on samples 06234051, 06234056, 06234057, and 06234062. All matrix spike recoveries met the required acceptance limits of 80-120%.

Overall Assessment of the Perchlorate Data: Sample results that fell at or below the Minimum Reporting Limit (MRL) were assigned the value of the MRL and the "U" qualifier was attached. No other qualification was required.

Below are the definitions for the qualifiers used in the Inorganic area when qualifying data from Inorganic analysis.

DATA QUALIFIERS

U	-	The analyte was not detected at or above the reported value.
J	-	The identification of the analyte is acceptable; the reported value is an estimate.
JK	-	The identification of the analyte is acceptable; the reported value is an estimate and may be <u>biased high</u> . The actual value is expected to be less than the reported value.
JL	-	The identification of the analyte is acceptable; the reported value is an estimate and may be <u>biased low</u> . The actual value is expected to be greater than the reported value.
UJ	-	The analyte was not detected at or above the reported value. The reported value is an estimate.
NA	-	Not Applicable. The parameter was not analyzed for, or other is no analytical result for this parameter. <u>No value is reported with this qualification.</u>

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 1 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234050
Type: Reg sample

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0 Perchlorate			Analysis Date : 6/14/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s):		*901'80 Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 2 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234051
Type: Reg sample

			Result	Units	Qlfr
GEN					
Parameter	: Perchlorate				Container ID : N2
Method	: 314.0	Perchlorate			Analysis Date : 6/14/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Analytes(s)	: *90180	Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 3 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234051
Type: Duplicate

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID : N2
Method : 314.0 Perchlorate			Analysis Date : 6/14/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Analytes(s): *90180 Perchlorate	2.0	ug/L	U

06234051 Duplicate

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 4 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234051
Type: Matrix Spike

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID : N2
Method : 314.0 Perchlorate			Analysis Date : 6/14/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Surrogate(s) : *90180 Perchlorate	103	%Rec	

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 5 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234051
Type: Matrix Spike Dupl

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID : N2
Method : 314.0	Perchlorate		Analysis Date : 6/14/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Surrogate(s): *90180	Perchlorate	103	%Rec

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 6 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234052
Type: Reg sample

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID : N1
Method : 314.0 Perchlorate			Analysis Date : 6/14/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Analytes(s): *90180 Perchlorate	2.0	ug/L	U

06234052 Reg sample

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 7 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD01SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234053
Type: Reg sample

			<u>Result</u>	<u>Units</u>	<u>Qlfr</u>
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s)	:	*90180 Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 8 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD01SD

Collected: 6/6/06
Matrix: Solid
Sample Number: 06234054
Type: Reg sample

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N1
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s):	*	90180 Perchlorate	0.020	mg/kg	U

06234054 Reg sample

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 9 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD02SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234055
Type: Reg sample

			Result	Units	Qlfr
GEN					
Parameter	: Perchlorate				Container ID : N2
Method	: 314.0	Perchlorate			Analysis Date : 6/15/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Analytes(s):	*90180	Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 10 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD02SD

Collected: 6/6/06
Matrix: Solid
Sample Number: 06234056
Type: Reg sample

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID : N2
Method : 314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method : 314:0			Prep Date : 6/14/2006
Analytes(s): *90180 Perchlorate	0.020	mg/kg	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 11 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 06234056
Type: Duplicate

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s):		*90180 Perchlorate	0.020	mg/kg	U

06234056 Duplicate

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 12 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 06234056
Type: Matrix Spike

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Surrogate(s)	:	*90180 Perchlorate	106	%Rec	

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 13 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 06234056
Type: Matrix Spike Dupl

			Result	Units	Olfr
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0	Perchlorate		Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Surrogate(s)	:	*90180	Perchlorate	105	%Rec

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 14 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: CR01SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234057
Type: Reg sample

			Result	Units	Qlfr
GEN					
Parameter	: Perchlorate				Container ID : N1
Method	: 314.0	Perchlorate			Analysis Date : 6/15/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Analytes(s):	*90180	Perchlorate	2.0	ug/L	U

06234057 Reg sample

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 15 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234057
Type: Duplicate

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N1
Method	:	314.0	Perchlorate		Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s)	:	*90180	Perchlorate	2.0	ug/L U

06234057 Duplicate

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 16 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234057
Type: Matrix Spike

			Result	Units	Qlfr
GEN					
Parameter	: Perchlorate				Container ID : N1
Method	: 314.0	Perchlorate			Analysis Date : 6/15/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Surrogate(s)	: *90180	Perchlorate	106	%Rec	

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 17 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234057
Type: Matrix Spike Dupl

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N1
Method	:	314.0	Perchlorate		Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Surrogate(s):	:	*90180	Perchlorate	103	%Rec

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 18 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234061
Type: Reg sample

			<u>Result</u>	<u>Units</u>	<u>Qlfr</u>
GEN					
Parameter	: Perchlorate				Container ID : N2
Method	: 314.0	Perchlorate			Analysis Date : 6/15/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Analytes(s):	*90180	Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 19 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234062
Type: Reg sample

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s)	:	*90180 Perchlorate	2.0	ug/L	U

06234062 Reg sample

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234062
Type: Duplicate

			Result	Units	Qlfr
GEN					
Parameter	: Perchlorate				Container ID : N2
Method	: 314.0	Perchlorate			Analysis Date : 6/15/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Analytes(s)	: *90180	Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 21 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234062
Type: Matrix Spike

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0	Perchlorate		Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Surrogate(s)	:	*90180	Perchlorate	102	%Rec

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 22 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234062
Type: Matrix Spike Dupl

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID : N2
Method	:	314.0	Perchlorate		Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Surrogate(s)	:	*90180	Perchlorate	102	%Rec

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 23 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234063
Type: Reg sample

			Result	Units	Qlfr
GEN					
Parameter	: Perchlorate				Container ID : N2
Method	: 314.0	Perchlorate			Analysis Date : 6/15/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Analytes(s):	*90180	Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 24 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234064
Type: Reg sample

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID : N1
Method : 314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Analytes(s): *90180 Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 25 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234065
Type: Reg sample

			<u>Result</u>	<u>Units</u>	<u>Qlfr</u>
GEN					
Parameter	:	Perchlorate			Container ID : N1
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s)	:	*90180 Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 26 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234066
Type: Reg sample

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID : N1
Method : 314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Analytes(s) : *90180 Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 27 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: CW060614A
Type: Blank

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID :
Method	:	314.0	Perchlorate		Analysis Date : 6/14/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Analytes(s)	:	*90180	Perchlorate	2.0	ug/L U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 28 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: CW060614A
Type: LCS

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID :
Method : 314.0 Perchlorate			Analysis Date : 6/14/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Surrogate(s): *90180 Perchlorate	105	%Rec	

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 29 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: CW060614A
Type: LCSD

			<u>Result</u>	<u>Units</u>	<u>Qlfr</u>
GEN					
Parameter	: Perchlorate				Container ID :
Method	: 314.0	Perchlorate			Analysis Date : 6/14/2006
Prep Method	: 314.0				Prep Date : 6/14/2006
Surrogate(s)	: *90180	Perchlorate	104	%Rec	

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 30 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: CW060615A
Type: Blank

	Result	Units	Qlfr
GEN			
Parameter : Perchlorate			Container ID :
Method : 314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method : 314.0			Prep Date : 6/14/2006
Analytes(s): *90180 Perchlorate	2.0	ug/L	U

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 31 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: CW060615A
Type: LCS

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID :
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Surrogate(s)	:	*90180 Perchlorate	106	%Rec	

7/19/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 32 of 32

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: CW060615A
Type: LCSD

			Result	Units	Qlfr
GEN					
Parameter	:	Perchlorate			Container ID :
Method	:	314.0 Perchlorate			Analysis Date : 6/15/2006
Prep Method	:	314.0			Prep Date : 6/14/2006
Surrogate(s)	:	*90180 Perchlorate	105	%Rec	



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: July 20, 2006

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Inorganic Data Summary Check, Former Nike Launch Site #81,
Poulsbo, Washington**

REF: TDD: 06-01-0035

PAN: 002233.0051.01SR

The data summary check of 2 sediment samples collected from the Former Nike Launch Site #81 in Poulsbo, Washington, has been completed. Target analyte list (TAL) metals analyses were performed by Bonner Analytical, Inc., Hattiesburg, Mississippi.

The samples were numbered: MJ73W0 MJ73W2

No discrepancies were noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

July 6, 2006

Reply To
Attn. Of: OEA-095

MEMORANDUM

SUBJECT: Data Validation for Former Nike Launch Site #81 SI,
Case# 35417, SDG: MJ73W0, Inorganic Analysis

FROM: Donald Matheny, Chemist *DM*
Technical Support Unit, OEA

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup (ECL-115)

CC: Mark Woodke, Ecology & Environment

The data validation of inorganic analyses for the above sample set is complete. Two (2) sediment samples were analyzed for total elements by Bonner Analytical, Hattiesburg, MS. Sample numbers for this delivery group are as follows:

MJ73W0

MJ73W2

DATA QUALIFICATIONS

The following comments refer to the lab's performance in meeting the quality control specifications outlined in the "CLP Statement of Work (CLP-SOW) for Inorganic Analysis, rev. ILM05.3", the "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" and the judgment of the reviewer. The comments presented herein are based on the information provided for the review.

1.0 TIMELINESS - Acceptable

The holding time from the date of collection to the date of digestion and analyses were met for all elements (180 days, mercury 28 days). Samples were collected on 6/6/06. ICP-AES analysis was conducted on 6/9/06 and mercury analysis on 6/14/06.

8.0 ICP-AES SERIAL DILUTION

A five-fold serial dilution was analyzed for sample MJ73W2. Percent differences ($\leq 10\%$) met the control limits ($\leq 10\%$) for all applicable elements with the exception of copper (24%) and zinc (20%). Copper and zinc data were qualified (JL) and may be biased low.

9.0 ASSESSMENT SUMMARY

The following is a summary of qualified data:

Arsenic data were qualified (U) due to the detected presence of this analyte in the preparation and/or instrument verification blanks.

Antimony, manganese and selenium data were qualified (J or UJ) due to low matrix spike recoveries. Values for these elements may be biased low.

Copper and zinc were qualified (JL) due to high percent differences for the serial dilution analysis. Reported values for these analytes may be biased low.

DATA QUALIFIERS

- U - The material was analyzed for, but was not detected above the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. The analyte may or may not be present in the sample.
- UJ - The analyte was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

PROJECT SPECIFIC DATA QUALIFIERS:

- L - Low bias.
- H - High bias.
- K - Unknown Bias.
- Q - Detected concentration is below the method reporting limit/ Contract Required Quantitation Limit.

USEPA - CLP

1A-IN

000010

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MJ73W2

Lab Name: Bonner Analytical Testing CompaContract: 68W02067Lab Code: BONNER Case No.: 35417

NRAS No.: _____

SDG NO.: MJ73W0Matrix (soil/water): SOILLab Sample ID: BT39791Level (low/med): LOWDate Received: 06/08/2006Solids: 75.4

Concentration Units (ug/L or mg/kg dry weight):

MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20400			P
7440-36-0	Antimony	8.0	<i>H</i>	<i>NHJL</i>	P
7440-38-2	Arsenic	1.6		<i>U</i>	P
7440-39-3	Barium	81.1			P
7440-41-7	Beryllium	0.41	<i>J</i>	<i>JA</i>	P
7440-43-9	Cadmium	0.13	<i>J</i>	<i>JA</i>	P
7440-70-2	Calcium	4820			P
7440-47-3	Chromium	35.9			P
7440-48-4	Cobalt	10.7			P
7440-50-8	Copper	26.8		<i>HJL</i>	P
7439-89-6	Iron	21900			P
7439-92-1	Lead	2.4			P
7439-95-4	Magnesium	6370			P
7439-96-5	Manganese	303		<i>HJL</i>	P
7439-97-6	Mercury	0.061	<i>J</i>	<i>JA</i>	CV
7440-02-0	Nickel	60.5			P
7440-09-7	Potassium	970			P
7782-49-2	Selenium	4.6	<i>H</i>	<i>NHJL</i>	P
7440-22-4	Silver	1.3	<i>U</i>		P
7440-23-5	Sodium	366	<i>J</i>	<i>JA</i>	P
7440-28-0	Thallium	3.3	<i>U</i>		P
7440-62-2	Vanadium	49.3			P
7440-66-6	Zinc	48.8		<i>HJL</i>	P

*DM
7-6-06*Color Before: BROWN

Clarity Before: _____

Texture: MEDIUMColor After: YELLOW

Clarity After: _____

Artifacts: YESComments: PLANT MATTER



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: July 20, 2006

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Inorganic Data Summary Check, Former Nike Launch Site #81,
Poulsbo, Washington**

REF: TDD: 06-01-0035 PAN: 002233.0051.01SR

The data summary check of 3 water samples collected from the Former Nike Launch Site #81 in Poulsbo, Washington, has been completed. Target analyte list (TAL) metals analyses were performed by Bonner Analytical, Inc., Hattiesburg, Mississippi.

The samples were numbered: MJ73T9 MJ73W1 MJ73W3

No discrepancies were noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

July 6, 2006

Reply To
Attn. Of: OEA-095

MEMORANDUM

SUBJECT: Data Validation for Former Nike Launch Site #81 SI,
Case# 35417, SDG: MJ73T9, Inorganic Analysis

FROM: Donald Matheny, Chemist *DM*
Technical Support Unit, OEA

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup (ECL-115)

CC: Mark Woodke, Ecology & Environment

The data validation of inorganic analyses for the above sample set is complete. Three (3) water samples were analyzed for total elements by Bonner Analytical, Hattiesburg, MS. Sample numbers for this delivery group are as follows:

MJ73T9 MJ73W1 MJ73W3

DATA QUALIFICATIONS

The following comments refer to the lab's performance in meeting the quality control specifications outlined in the "CLP Statement of Work (CLP-SOW) for Inorganic Analysis, rev. ILM05.3", the "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" and the judgment of the reviewer. The comments presented herein are based on the information provided for the review.

1.0 TIMELINESS - Acceptable

The holding time from the date of collection to the date of digestion and analyses were met for all elements (180 days, mercury 28 days). Samples were collected on 6/6/06. ICP-AES and mercury analyses were conducted on 6/13/06.

8.0 ICP-AES SERIAL DILUTION

A five-fold serial dilution was analyzed for sample MJ73W3. Percent differences ($\leq 4\%$) met the control limits ($\leq 10\%$) for all applicable elements with the exception of aluminum (18%) and calcium (37%). Aluminum and calcium values were qualified (JL) and may be biased low.

9.0 ASSESSMENT SUMMARY

The following is a summary of qualified data:

A number of reported values for aluminum and zinc were qualified (U) due to the detected presence of these analytes in the preparation and/or instrument verification blanks.

Arsenic data were qualified (J or UJ) due to a low matrix spike recovery. Arsenic values may be biased low.

Aluminum and calcium data were qualified (JL) due to high percent differences for the serial dilution analysis. Reported values for these analytes may be biased low.

DATA QUALIFIERS

- U - The material was analyzed for, but was not detected above the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. The analyte may or may not be present in the sample.
- UJ - The analyte was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

PROJECT SPECIFIC DATA QUALIFIERS:

- L - Low bias.
- H - High bias.
- K - Unknown Bias.
- Q - Detected concentration is below the method reporting limit/
Contract Required Quantitation Limit.

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000010

EPA SAMPLE NO.

MJ73W1

Lab Name: Bonner Analytical Testing CompaContract: 68W02067Lab Code: BONNER Case No.: 35417

NRAS No.: _____

SDG NO.: MJ73T9Matrix (soil/water): WATERLab Sample ID: BT39793Level (low/med): LOWDate Received: 06/08/2006Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight):

UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	614		8 JL	P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U	N u JL	P
7440-39-3	Barium	5.8	8	JA	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	6390		8 JL	P
7440-47-3	Chromium	1.4	8	JA	P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	2.1	8	JA	P
7439-89-6	Iron	452			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	1020	8	JA	P
7439-96-5	Manganese	24.6			P
7439-97-6	Mercury	0.032	8	JA	CV
7440-02-0	Nickel	1.6	8	JA	P
7440-09-7	Potassium	123	8	JA	P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	2180	8	JA	P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	2.3	8	JA	P
7440-66-6	Zinc	6.5	8	u	P

2M
7-6-06Color Before: COLORLESSClarity Before: CLEAR

Texture: _____

Color After: COLORLESSClarity After: CLEAR

Artifacts: _____

Comments: _____



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: July 28, 2006

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Former Nike Launch Site #81, Poulsbo, Washington**

REF: TDD: 06-01-0035 PAN: 002233.0051:01SR

The data quality assurance review of 12 water and 2 soil samples collected from the Former Nike Launch Site #81 in Poulsbo, Washington, has been completed. Unsymmetrical dimethyl hydrazine (UDMH - STL SOP UDMH) analyses were performed by STL-Denver, Arvada, Colorado.

The samples were numbered:

06234050	06234051	06234052	06234053	06234054	06234055
06234056	06234057	06234061	06234062	06234063	06234064
06234065	06234066				

Data Qualifications:

1. Sample Holding Times: Acceptable.

The samples were maintained and received within the QC limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The samples were collected on June 6, 2006, were extracted between June 12 and 14, 2006, and were analyzed for UDMH on June 13 or 15, 2006, therefore meeting QC criteria of less than 7 days between collection and extraction (14 days for soils) and less than 40 days between extraction and analysis for UDMH.

2. Initial Calibration: Acceptable.

The correlation coefficients were greater than 0.995.

3. Continuing Calibration: Acceptable.

All initial and continuing calibration verifications were within QC limits of 80% to 120%.

5. Blanks: Acceptable.

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

6. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) and Laboratory Control Sample (LCS)/LCS Duplicate (LCSD) Analysis: Acceptable.

MS, MSD, LCS, and LCSD analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within QC limits.

7. Duplicate Analysis: Acceptable.

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

8. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F080179
 Matrix: WATER
 % Moisture: N/A
 Basis: Wet
 Analysis Method: UDMH
 Unit: ug/L
 QC Batch ID: 6164589
 Sample Aliquot:
 Dilution Factor: 1

Client Sample ID: 06234050
 Lab Sample ID: D6F080179-006
 Lab WorkOrder: H6058
 Date/Time Collected: 06/06/06 08:35
 Date/Time Received: 06/08/06 09:15
 Date/Time Leached:
 Date/Time Extracted: 06/12/06 21:11
 Date/Time Analyzed: 06/13/06 10:45
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
62006

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
Lot/SDG Number: D6F080179
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: UDMH
Unit: ug/L
QC Batch ID: 6164589
Sample Aliquot:
Dilution Factor: 1

Client Sample ID: 06234051
Lab Sample ID: D6F080179-007
Lab WorkOrder: H606A
Date/Time Collected: 06/06/06 08:55
Date/Time Received: 06/08/06 09:15
Date/Time Leached:
Date/Time Extracted: 06/12/06 21:11
Date/Time Analyzed: 06/13/06 11:41
Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
6-20-06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
Lot/SDG Number: D6F080179
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: UDMH
Unit: ug/L
QC Batch ID: 6164589
Sample Aliquot:
Dilution Factor: 1

Client Sample ID: 06234052
Lab Sample ID: D6F080179-008
Lab WorkOrder: H606F
Date/Time Collected: 06/06/06 10:35
Date/Time Received: 06/08/06 09:15
Date/Time Leached:
Date/Time Extracted: 06/12/06 21:11
Date/Time Analyzed: 06/13/06 14:01
Instrument ID: ICA

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
62006

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
Lot/SDG Number: D6F080179
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: UDMH
Unit: ug/L
QC Batch ID: 6164589
Sample Aliquot:
Dilution Factor: 1

Client Sample ID: 06234053
Lab Sample ID: D6F080179-001
Lab WorkOrder: H605W
Date/Time Collected: 06/06/06 15:00
Date/Time Received: 06/08/06 09:15
Date/Time Leached:
Date/Time Extracted: 06/12/06 21:11
Date/Time Analyzed: 06/13/06 05:36
Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
62006

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F080179
 Matrix: SOLID
 % Moisture: 12
 Basis: Dry
 Analysis Method: UDMH
 Unit: ug/kg
 QC Batch ID: 6166397
 Sample Aliquot:
 Dilution Factor: 5

Client Sample ID: 06234054
 Lab Sample ID: D6F080179-004
 Lab WorkOrder: H6054
 Date/Time Collected: 06/06/06 15:15
 Date/Time Received: 06/08/06 09:15
 Date/Time Leached:
 Date/Time Extracted: 06/13/06 16:00
 Date/Time Analyzed: 06/15/06 04:57
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	72	72	570	U <i>Amw</i>

- U Result is less than the method detection limit (MDL).
 G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Amw
6-20-06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F080179
 Matrix: WATER
 % Moisture: N/A
 Basis: Wet
 Analysis Method: UDMH
 Unit: ug/L
 QC Batch ID: 6164589
 Sample Aliquot:
 Dilution Factor: 1

Client Sample ID: 06234055
 Lab Sample ID: D6F080179-002
 Lab WorkOrder: H6051
 Date/Time Collected: 06/06/06 15:20
 Date/Time Received: 06/08/06 09:15
 Date/Time Leached:
 Date/Time Extracted: 06/12/06 21:11
 Date/Time Analyzed: 06/13/06 06:32
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
6-20-06

**STL**

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
Lot/SDG Number: D6F080179
Matrix: SOLID
% Moisture: 21
Basis: Dry
Analysis Method: UDMH
Unit: ug/kg
QC Batch ID: 6166397
Sample Aliquot:
Dilution Factor: 5

Client Sample ID: 06234056
Lab Sample ID: D6F080179-005
Lab WorkOrder: H6056
Date/Time Collected: 06/06/06 15:30
Date/Time Received: 06/08/06 09:15
Date/Time Leached:
Date/Time Extracted: 06/13/06 16:00
Date/Time Analyzed: 06/15/06 06:49
Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	81	81	640	U <i>am</i>

- U Result is less than the method detection limit (MDL).
G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

MW
6-20-06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F080179
 Matrix: WATER
 % Moisture: N/A
 Basis: Wet
 Analysis Method: UDMH
 Unit: ug/L
 QC Batch ID: 6164589
 Sample Aliquot:
 Dilution Factor: 1

Client Sample ID: 06234057
 Lab Sample ID: D6F080179-003
 Lab WorkOrder: H6053
 Date/Time Collected: 06/06/06 14:45
 Date/Time Received: 06/08/06 09:15
 Date/Time Leached:
 Date/Time Extracted: 06/12/06 21:11
 Date/Time Analyzed: 06/13/06 08:25
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
6-20-06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
Lot/SDG Number: D6F080179
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: UDMH
Unit: ug/L
QC Batch ID: 6164589
Sample Aliquot:
Dilution Factor: 1

Client Sample ID: 06234061
Lab Sample ID: D6F080179-009
Lab WorkOrder: H606G
Date/Time Collected: 06/06/06 11:30
Date/Time Received: 06/08/06 09:15
Date/Time Leached:
Date/Time Extracted: 06/12/06 21:11
Date/Time Analyzed: 06/13/06 14:57
Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
6-20-06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F080179
 Matrix: WATER
 % Moisture: N/A
 Basis: Wet
 Analysis Method: UDMH
 Unit: ug/L
 QC Batch ID: 6164589
 Sample Aliquot:
 Dilution Factor: 1

Client Sample ID: 06234062
 Lab Sample ID: D6F080179-010
 Lab WorkOrder: H6061
 Date/Time Collected: 06/06/06 10:30
 Date/Time Received: 06/08/06 09:15
 Date/Time Leached:
 Date/Time Extracted: 06/12/06 21:11
 Date/Time Analyzed: 06/13/06 16:50
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
6/20/06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F080179
 Matrix: WATER
 % Moisture: N/A
 Basis: Wet
 Analysis Method: UDMH
 Unit: ug/L
 QC Batch ID: 6164589
 Sample Aliquot:
 Dilution Factor: 1

Client Sample ID: 06234063
 Lab Sample ID: D6F080179-011
 Lab WorkOrder: H606K
 Date/Time Collected: 06/06/06 10:50
 Date/Time Received: 06/08/06 09:15
 Date/Time Leached:
 Date/Time Extracted: 06/12/06 21:11
 Date/Time Analyzed: 06/13/06 17:46
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW
6/20/06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F070196
 Matrix: WATER
 % Moisture: N/A
 Basis: Wet
 Analysis Method: UDMH
 Unit: ug/L
 QC Batch ID: 6164589
 Sample Aliquot:
 Dilution Factor: 1

Client Sample ID: 06234064
 Lab Sample ID: D6F070196-001
 Lab WorkOrder: H6V22
 Date/Time Collected: 06/06/06 13:00
 Date/Time Received: 06/07/06 09:00
 Date/Time Leached:
 Date/Time Extracted: 06/12/06 21:11
 Date/Time Analyzed: 06/13/06 02:48
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

MW 6-20-06

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: <u>STL DENVER</u>	Client Sample ID: <u>06234065</u>
Lot/SDG Number: <u>D6F070196</u>	Lab Sample ID: <u>D6F070196-002</u>
Matrix: <u>WATER</u>	Lab WorkOrder: <u>H6V26</u>
% Moisture: <u>N/A</u>	Date/Time Collected: <u>06/06/06 13:30</u>
Basis: <u>Wet</u>	Date/Time Received: <u>06/07/06 09:00</u>
Analysis Method: <u>UDMH</u>	Date/Time Leached:
Unit: <u>ug/L</u>	Date/Time Extracted: <u>06/12/06 21:11</u>
QC Batch ID: <u>6164589</u>	Date/Time Analyzed: <u>06/13/06 03:44</u>
Sample Aliquot:	Instrument ID: <u>IC4</u>
Dilution Factor: <u>1</u>	

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	2.3	2.3	10	U

U Result is less than the method detection limit (MDL).

Mw6-2006

Ecology and Environment, Inc.
Wet Chemistry Analysis Data Sheet

Lab Name: STL DENVER
 Lot/SDG Number: D6F080179
 Matrix: WATER
 % Moisture: N/A
 Basis: Wet
 Analysis Method: UDMH
 Unit: ug/L
 QC Batch ID: 6166399
 Sample Aliquot:
 Dilution Factor: 5

Client Sample ID: 06234066
 Lab Sample ID: D6F080179-Q12
 Lab WorkOrder: H606V
 Date/Time Collected: 06/06/06 09:55
 Date/Time Received: 06/08/06 09:15
 Date/Time Leached:
 Date/Time Extracted: 06/14/06 20:32
 Date/Time Analyzed: 06/15/06 09:09
 Instrument ID: IC4

CAS No.	Analyte	Conc.	MDL	RL	Q
57-14-7	UDMH	12	12	50	U G ^{mw}

- U Result is less than the method detection limit (MDL).
 G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

MW
6-20-06



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: July 28, 2006

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Summary Check, Former Nike Launch Site #81,
Poulsbo, Washington**

REF: TDD: 06-01-0035

PAN: 002233.0051.01SR

The data summary check of 12 samples collected from the Former Nike Launch Site #81 in Poulsbo, Washington, has been completed. N-nitrosodimethylamine (NDMA) analyses were performed by the Manchester Environmental Laboratory (MEL), Port Orchard, Washington.

The samples were numbered:

06234050	06234051	06234052	06234053	06234055	06234057
06234061	06234062	06234063	06234064	06234065	06234066

No discrepancies were noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for NDMA Results from the USEPA Region 10
Laboratory

PROJECT NAME: Former Nike Launch Site

PROJECT CODE: TEC-877A

FROM: Gerald Dodo, Chemistry Supervisor
USEPA Region 10 Laboratory

TO: Ken Marcy, Project Officer
Office of Environmental Cleanup
Site Cleanup Unit 2, USEPA Region 10

CC: Mark Woodke, Ecology & Environment

I have authorized release of this data package. Attached you will find the NDMA results for the Former Nike Launch Site project samples collected on 06/06/2006. For further information regarding the attached data, contact Randy Cummings at (360)871-8707. For the schedule of the remaining analyses, contact Gerald Dodo at (360)871-8728.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

July 11, 2006

MEMORANDUM

SUBJECT: Data Review for the NDMA Analysis of Former Nike Launch Site.
Project Codes: TEC-877A Account Code: 06T10P302DD2C10ZZLA00

FROM: Randy Cummings, Chemist, Laboratory
Office of Environmental Assessment, USEPA Region 10

TO: Ken Marcy, Project Officer
Office of Environmental Cleanup, Site Cleanup Unit 2, USEPA Region 10

CC: Mark Woodke, Ecology & Environment

The data review of the N-nitrosodimethylamine (NDMA) analysis results for the Former Nike Launch Site water samples has been completed. The samples were analyzed by the USEPA Region 10 Laboratory located in Manchester, WA using USEPA SW846 Method 8270C (Manchester SOPs Or_P001B version 3, and Or_270C, version 3).

The data for the following sample number is reviewed in this report.

06234050 06234051 06234052 06234053 06234055 06234057 06234061 06234062
06234063 06234064 06234065 06234066

DATA QUALIFICATIONS

The following comments refer to laboratory performance in meeting the quality control specifications outlined in the analytical method, the Manchester Laboratory Quality Assurance Manual, standard operating procedures, and professional judgment.

The conclusions presented herein are based on the information provided for the review.

Holding Time - Acceptable

The samples were extracted within seven days of collection. Extracts have a holding time maximum of 40 days from the time of preparation. The sample was analyzed within this criterion.

GC/MS Tuning and Performance - Acceptable

The tuning summary agreed with the raw data. All decafluorotriphenylphosphine ion abundance ratios met criteria. Sample analyses were preceded by a tune less than 12 hours prior to analysis.

Initial Calibration - Acceptable

An initial calibration was performed on 06Jun06 for the target and surrogate compounds and met the criteria outlined in the SOP (Or_270C, version 3). Average relative response factors (RRFs) were ≥ 0.05 . Percent relative standard deviations (%RSDs) of the RRFs were $\leq 15\%$. Coefficients of Determination were ≥ 0.99 .

Second source check analyses resulted with percent differences from the expected values of $\leq 30\%$ for all compounds.

Continuing Calibration - Acceptable

The continuing calibration check met the criteria for frequency of analysis and relative retention time (RRT) windows for all target and surrogate compounds. The RRFs were ≥ 0.05 and the percent accuracies were 80-120% of the true values.

Blanks - Acceptable

Two method blanks were prepared and analyzed to evaluate the potential for laboratory contamination and the effect on sample results. Target compounds detected in the samples were reported without qualification if the sample result area integration exceeded ten times that of the blank for common contaminants (e.g., phthalates) or five times that of the blank for the other target compounds. Detected sample results were qualified 'U' if the area integration was below these criteria. The sample concentration or the sample quantitation limit, whichever is greater, was reported as the qualified result.

Surrogates - Acceptable

Surrogate recoveries are used to help in the evaluation of laboratory performance on individual samples. For this project two surrogates were used: d₄-1,2-dichlorobenzene and ²C₁₃/d₆-NDMA. The SOP calls for spike concentration of 20 µg/sample, whereas the samples in this set were spiked at 4 µg/sample. However, the recoveries met the SOP criteria at lower spike level for d₄-1,2-dichlorobenzene (20 – 130%) and were within the NDMA acceptance limits for ²C₁₃/d₆-NDMA (50 – 70%). Therefore no qualification resulted.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) - Acceptable

Matrix spiked samples are used to evaluate matrix effects on analyte recovery. One pair of matrix spiked samples was prepared for this set. This pair met the criteria for accuracy (50 – 70%) using the two standard deviation range provided in the SOP for fortified blanks, and precision (35%) from the criterion provided in the QAPP).

Laboratory Control Sample - Acceptable

Data for laboratory control samples (LCS) are generated to provide ongoing information on the accuracy of the analytical method and the laboratory performance. Four spiked reagent water analyses were performed as LCSs (two pairs: OBF6163F1 and OBF6163F2, spiked at 4ppB; and OBF6163F3 and OBF6163F4, spiked at 0.8ppB). The LCS recoveries were compared against criteria based on historical results from pooled water extraction recoveries (50 – 70%, spiked at 16ppB).

Sample OBF6163F4 had recoveries below the established range. The deviation was not judged to be critical to evaluating the method performance for this project since one of the surrogates was an isotope labeled form of NDMA. The labeled form of NDMA should accurately reflect the expected recovery of the un-labeled compound. Recovery of this surrogate was within the established range for all of the samples, blanks and spiked blanks except OBF6163F4. Recovery for this surrogate in sample OBF6163F4 was low proportionally to the un-labeled compound, thus suggesting that the results were isolated to the sample and not indicative of an overall problem for the project. Therefore no qualification was applied.

Internal Standard Performance - Acceptable

The performance criteria for internal standards ensure that GC/MS sensitivity and response are stable during every analytical run. The retention time variations of all internal standards were within 30 seconds of the continuing calibration standard. The percent areas of all the internal standards were within the specified 50% to 200% of the continuing calibration standard.

Target Compound Identification - Acceptable

The RRTs for all detected target compounds were within acceptable limits of the initial or continuing calibration standards. No reference spectra data base was created. Identifications were based on selected ion ratios. Criteria were met, or judged acceptable, for ion abundance matching. No target compounds were detected.

Compound Quantitation - Acceptable

The initial calibration functions were used for calculations. Reported quantitation limits were based on the initial calibration standards and sample size used for the analysis. All manual integrations were reviewed and judged to be appropriate.

Overall Assessment

All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this, the overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact Randy Cummings at the Region 10 Laboratory, phone number (360) 871-8707.

Qualifier/ Remark Code	Definition (Codes Assigned to Values)
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable. <u>No value is reported with this qualification.</u>
NJ	There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. <u>No value is reported with this qualification.</u>

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 1 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234050
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 1N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	56	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234051
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 1N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	63	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	60	%Rec	

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 3 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234051
Type: Matrix Spike

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 3N		
Method	: 8270 BNA	Analysis Date : 6/14/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	59	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	58	%Rec	
	62759 N-Nitrosodimethylamine	57	%Rec	

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 4 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234051
Type: Matrix Spike Dupl

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles	Container ID : 5N		
Method	8270 BNA	Analysis Date : 6/14/2006		
Prep Method	3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Surrogate(s)	95501 Benzene, 1,2-dichloro-	57	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	58	%Rec	
	62759 N-Nitrosodimethylamine	56	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234052
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 2N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	58	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	55	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD01SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234053
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 1N		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	62	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	59	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD02SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234055
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles	Container ID : 1N		
Method	8270 BNA	Analysis Date : 6/13/2006		
Prep Method	3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	58	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	56	%Rec	

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 8 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: CR01SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234057
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles	Container ID : 3N		
Method	8270 BNA	Analysis Date : 6/13/2006		
Prep Method	3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	57	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234061
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles	Container ID : 1N		
Method	8270 BNA	Analysis Date : 6/13/2006		
Prep Method	3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	59	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	60	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234062
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 1N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	52	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	62	%Rec	

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 11 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234063
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles	Container ID : 1N		
Method	8270 BNA	Analysis Date : 6/13/2006		
Prep Method	3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	50	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	53	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234064
Type: Reg sample

		Result	Units	Olfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 2N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	50	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	59	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234065
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 2N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	56	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 14 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234066
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 2N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	55	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	59	%Rec	

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 15 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F1
Type: LCS

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 0		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	49	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	56	%Rec	
	62759 N-Nitrosodimethylamine	53	%Rec	

OBF6163F1 LCS

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 16 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F2
Type: LCSD

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 0
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	48	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	
	62759 N-Nitrosodimethylamine	55	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F3
Type: LCS

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 0		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	44	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	51	%Rec	
	62759 N-Nitrosodimethylamine	55	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F4
Type: LCSD

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 0
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	39	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	42	%Rec	
	62759 N-Nitrosodimethylamine	46	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBW6163B1
Type: Blank

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles			Container ID : 0
Method	8270 BNA			Analysis Date : 6/13/2006
Prep Method	3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	52	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	58	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBW6163B2
Type: Blank

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 0
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	50	%Rec	
	: *17829059 D6-13C2 N-Nitrosodimethylamine	52	%Rec	



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: August 30, 2006

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Summary Check, Former Nike Launch Site #81,
Poulsbo, Washington**

REF: TDD: 06-01-0035 PAN: 002233.0051.01SR

The data summary check of 2 sediment samples collected from the Former Nike Launch Site #81 in Poulsbo, Washington, has been completed. N-nitrosodimethylamine (NDMA) analyses were performed by the Manchester Environmental Laboratory (MEL), Port Orchard, Washington.

The samples were numbered: 06234054 06234056

No discrepancies were noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for N-nitrosodimethylamine Results from the USEPA
Region 10 Laboratory

PROJECT NAME: Former Nike Launch Site #81, Poulsbo, WA

PROJECT CODE: TEC-877A

FROM: Gerald Dodo, Supervisory Chemist
Laboratory Unit, Office of Environmental Assessment, USEPA Region 10

TO: Ken Marcy, RPM
Site Cleanup Unit 2, Office of Environmental Cleanup, USEPA Region 10

CC: Mark Woodke, Ecology & Environment, Inc.

I have authorized release of this data package. Attached you will find the N-nitrosodimethylamine results for the Former Nike Launch Site #81, Poulsbo, WA project for the soil samples collected 06/06/06. For further information regarding the attached data, contact Chris Pace at 360-871-8703. For the schedule for the remaining analyses, contact Gerald Dodo at 360-871-8728.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

July 26, 2006

MEMORANDUM

SUBJECT: Data Review for the N-nitrosodimethylamine Analysis of Samples from the
Former Nike Launch Site #81, Poulsbo, WA

Project Code: TEC-877A
Account Code: 06T10P302DD2C10ZZLA00

FROM: Chris Pace, Chemist
Laboratory Unit, Office of Environmental Assessment, USEPA Region 10

TO: Ken Marcy, RPM
Site Cleanup Unit 2, Office of Environmental Cleanup, USEPA Region 10

CC: Mark Woodke, Ecology & Environment, Inc.

The data review of the N-nitrosodimethylamine analysis results for water samples collected from the above referenced site has been completed. The samples were analyzed by the USEPA Region 10 Laboratory staff located in Manchester, WA using modifications to EPA methods 3541 and 8270C.

The data for the following sample numbers are reviewed in this report.

06234054 06234056

DATA QUALIFICATIONS

The following comments refer to laboratory performance in meeting the quality control specifications outlined in the analytical method, the project quality assurance plan, the Manchester Laboratory Quality Assurance Manual, standard operating procedures, and professional judgment.

For those tests for which the USEPA Region 10 Laboratory has been NELAC accredited, all requirements of the current NELAC Standard have been met.

The conclusions presented herein are based on the information provided for the review.

Holding Time - Acceptable

The samples were extracted within the 14-day holding time for soil samples and analyzed within the 40-day holding time for the prepared extract.

GC/MS Tuning and Performance - Acceptable

The tuning summary agreed with the raw data. All decafluorotriphenylphosphine ion abundance ratios met criteria. Sample analyses were preceded by a tune less than 12 hours prior to analysis.

Initial Calibration - Acceptable

Initial calibration was performed on 06/19/06 for the target and surrogate compounds. Average relative response factors (RRFs) met the criteria of ≥ 0.05 . Percent relative standard deviations (%RSDs) of the RRFs met the criteria of $\leq 30\%$.

Continuing Calibration - Acceptable

The continuing calibration check for met the criteria for frequency of analysis and relative retention time (RRT) windows for all target and surrogate compounds. The RRFs were ≥ 0.05 and the percent accuracies were 80-120% of the true values.

Blanks - Acceptable

A method blank is prepared and analyzed with each sample extraction batch to evaluate the potential for laboratory contamination and effects on the sample results. N-nitrosodimethylamine was not detected in the blank.

Surrogates

Surrogate recoveries are used to help in the evaluation of laboratory performance on individual samples. The surrogate recoveries met the criteria of 60-140% except for the following.

Samples 06234056 and 06234056S2 resulted with $>140\%$ recovery for penol-d5. The remaining three surrogates had acceptable recoveries. None of the sample data were qualified on this basis alone.

Sample 06234056S1 resulted with $<60\%$ recovery for 1,2-dichlorobenze-d4. The remaining three surrogates had acceptable recoveries. None of the sample data were qualified on this basis alone.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses are performed to provide information on the effects of sample matrices toward the analytical method. MS/MSD analyses were performed using samples 06234056

(S1/S2). The recoveries met the criteria of 60-140% with a relative percent difference (RPD) of $\leq 35\%$ except for the following.

Sample 06234056S2 resulted with $< 60\%$ recovery for N-nitrosodimethylamine. The RPD between 06234056S1/S2 was > 35 . The non-detected results in the native sample were qualified 'UJ'.

Laboratory Control Samples - Acceptable

Data for laboratory control samples (LCS) are generated to provide information on the accuracy of the analytical method and the laboratory performance. The LCS recoveries met the criteria of 60-140% with a relative percent difference (RPD) of ≤ 35 .

Internal Standard Performance

Internal standards performance criteria ensure that GC/MS sensitivity and response are stable during every analytical run. The retention time variations of all internal standards were within 30 seconds of the continuing calibration standard. The percent areas of all the internal standards were within the specified 50% to 200% of the continuing calibration standard for all reported results except for the following.

Samples 06234056 and 06234056S2 resulted with $< 50\%$ percent area for 1,4-dichlorobenzene. The non-detected results in the native sample were qualified 'UJ'.

Target Compound Identification

N-nitrosodimethylamine was not detected in the samples.

Compound Quantitation - Acceptable

The initial calibration functions were used for calculations. Reported quantitation limits were based on the initial calibration standards and sample size used for the analysis. Manual integrations were reviewed and judged acceptable.

Overall Assessment

All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this, the overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact Chris Pace at the Region 10 Laboratory, phone number (360)871-8703.

Qualifier/ Remark Code	Definition (Codes Assigned to Values)
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable. <u>No value is reported with this qualification.</u>
NJ	There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. <u>No value is reported with this qualification.</u>

7/28/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 1 of 7

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD01SD

Collected: 6/6/06
Matrix: Solid
Sample Number: 06234054
Type: Reg sample

		Result	Units	Olfr
GCMS				
Parameter	: Semi-volatiles	Container ID : N2		
Method	: 8270C-MO Semivolatiles by GCMS	Analysis Date : 6/26/2006		
Prep Method	: 3541	Prep Date : 6/13/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	37	ug/Kg	U
Surrogate(s):	2199691 1,2-Dichlorobenzene-d4	60	%Rec	
	93951736 2-chlorophenol-d4	68	%Rec	
	367124 Phenol, 2-fluoro-	77	%Rec	
	4165622 Phenol-d5	74	%Rec	

06234054-Reg sample

7/28/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 2 of 7

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD02SD

Collected: 6/6/06
Matrix: Solid
Sample Number: 06234056
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : N1
Method	: 8270C-MO Semivolatiles by GCMS			Analysis Date : 6/26/2006
Prep Method	: 3541			Prep Date : 6/13/2006
Analytes(s):	62759 N-Nitrosodimethylamine	41	ug/Kg	UJ
Surrogate(s):	2199691 1,2-Dichlorobenzene-d4	67	%Rec	
	93951736 2-chlorophenol-d4	84	%Rec	
	367124 Phenol, 2-fluoro-	60	%Rec	
	4165622 Phenol-d5	161	%Rec	

7/28/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 3 of 7

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Solid
Sample Number: 06234056
Type: Matrix Spike

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : N1
Method	: 8270C-MO Semivolatiles by GCMS			Analysis Date : 6/26/2006
Prep Method	: 3541			Prep Date : 6/13/2006
Surrogate(s)	2199691 1,2-Dichlorobenzene-d4	52	%Rec	
	93951736 2-chlorophenol-d4	80	%Rec	
	62759 N-Nitrosodimethylamine	83	%Rec	
	367124 Phenol, 2-fluoro-	82	%Rec	
	4165622 Phenol-d5	90	%Rec	

7/28/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 4 of 7

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Solid
Sample Number: 06234056
Type: Matrix Spike Dupl

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : N1		
Method	: 8270C-MO Semivolatiles by GCMS	Analysis Date : 6/26/2006		
Prep Method	: 3541	Prep Date : 6/13/2006		
Surrogate(s):	2199691 1,2-Dichlorobenzene-d4	66	%Rec	
	93951736 2-chlorophenol-d4	117	%Rec	
	62759 N-Nitrosodimethylamine	46	%Rec	
	367124 Phenol, 2-fluoro-	101	%Rec	
	4165622 Phenol-d5	174	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Solid
Sample Number: BF6164B1
Type: LCS

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 0		
Method	: 8270C-MO Semivolatiles by GCMS	Analysis Date : 6/26/2006		
Prep Method	: 3541	Prep Date : 6/13/2006		
Surrogate(s)	2199691 1,2-Dichlorobenzene-d4	90	%Rec	
	93951736 2-chlorophenol-d4	89	%Rec	
	62759 N-Nitrosodimethylamine	99	%Rec	
	367124 Phenol, 2-fluoro-	88	%Rec	
	4165622 Phenol-d5	107	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Solid
Sample Number: BF6164B2
Type: LCSD

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 0		
Method	: 8270C-MO Semivolatiles by GCMS	Analysis Date : 6/26/2006		
Prep Method	: 3541	Prep Date : 6/13/2006		
Surrogate(s):	2199691 1,2-Dichlorobenzene-d4	77	%Rec	
	93951736 2-chlorophenol-d4	87	%Rec	
	62759 N-Nitrosodimethylamine	87	%Rec	
	367124 Phenol, 2-fluoro-	92	%Rec	
	4165622 Phenol-d5	97	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Solid
Sample Number: BS6164A1
Type: Blank

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 0		
Method	: 8270C-MO Semivolatiles by GCMS	Analysis Date : 6/26/2006		
Prep Method	: 3541	Prep Date : 6/13/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	31	ug/Kg	U
Surrogate(s):	2199691 1,2-Dichlorobenzene-d4	77	%Rec	
	93951736 2-chlorophenol-d4	63	%Rec	
	367124 Phenol, 2-fluoro-	73	%Rec	
	4165622 Phenol-d5	72	%Rec	

D

GLOBAL POSITIONING SYSTEM DATA

Appendix D Global Positioning System Data

Sample Location	Latitude (Degrees North)	Longitude (Degrees West)
Bus Barn Well	47.75235	122.66496
Westside Well	47.77535	122.64849
Monitoring Well	47.75587	122.66116
Pond 2	47.75514	122.66079
Pond 1	47.76280	122.65485
Johnson Creek	47.75400	122.66364
Accumar Corporation	47.75404	122.66170
(b) (6)	47.75572	122.65227
	47.75133	122.66212
	47.75097	122.65955
	47.75060	122.66222
	47.73371	122.66119

APPENDIX A
PHOTOGRAPHIC DOCUMENTATION

PHOTOGRAPH IDENTIFICATION SHEET

Camera Serial #: 645492

TDD #: 96-11-0007

Lens Type: 35mm

Site Name: Former NIKE Missile Launch Site

Photo No.	Date	Time	By	Description
1	12/17/96	0900	MM	Looking north at the area behind the former barracks (note the small orange wooden stake at right of photo where a subsurface background soil sample was collected).
2	12/17/96	0915	MM	Same area behind the former barracks (wooden stake at left identifies location of the requested Corps of Engineers subsurface sample where a heating oil UST once existed).
3	12/17/96	0930	MM	Closer view of the Corps of Engineers sample location (the small wooden stake identifies the actual sample location).
4	12/17/96	1000	MM	Photo of the former missile assembly building.
5	12/17/96	1015	MM	View of the north side of the missile assembly building and location of sample location (see orange wooden stake at right).
6	12/18/96	0815	MM	Photo of widespread debris inside the former missile assembly building.
7	12/18/96	0818	MM	View of a room inside the missile assembly building with debris piled on floor (note drum that is labeled lead paint).
8	12/18/96	0820	MM	Looking south from the west side of missile assembly building (maintenance shop is located behind trees at the right of photo). See sample location map for sample locations in this area.
9	12/18/96	0822	MM	View of maintenance shop located near the missile assembly building (site of several sample locations).
10	12/18/96	0825	MM	View of two side by side borings that were often needed to produce enough soil to adequately fill sample jars (note the bentonite grout backfilled into all abandoned holes).
11	12/18/96	0827	MM	Photo of geoprobe equipment used to collect all subsurface soil samples.
12	12/18/96	0830	MM	View of the former missile fueling station after being cleared by bulldozer to better allow geoprobe access.
13	12/18/96	0832	MM	Another view of former missile fueling station area.
14	12/18/96	0834	MM	View of the north side of the former missile fueling station and location of several boring locations (see stakes).
15	12/18/96	0837	MM	View of more boring locations in the area of the missile fueling station.
16	12/18/96	0840	MM	View of the area north of the missile silos prior being cleared for an EM-31 survey.

PHOTOGRAPH IDENTIFICATION SHEET

Camera Serial #: 645492

TDD #: 96-11-0007

Lens Type: 35mm

Site Name: Former NIKE Missile Launch Site

Photo No.	Date	Time	By	Description
17	12/18/96	0841	MM	Area south of the missile silos being cleared by a bulldozer prior to the EM-31 survey.
18	12/18/96	0843	MM	View of cleared area south of missile silos where EM-31 survey took place.
19	12/18/96	0845	MM	Cleared area south of the missile silos and site of EM-31 survey.
20	12/18/96	0847	MM	Geoprobe operations taking place in the area of EM-31 survey.
21	12/18/96	0850	MM	Closer view of samples being collected from geoprobe in area of the EM-31 (heavy brush existed in this area before it was bulldozed).
22	12/18/96	0852	MM	Former transformer storage area located near the generator building (site of 3 borings adjacent to concrete pad).
23	12/18/96	0855	MM	View of southwest side of transformer pad area and site of a geoprobe boring (note small orange stake).
24	12/18/96	0857	MM	South side of transformer pad after being cleared by bulldozer.
25	12/18/96	0900	MM	Southeast side of transformer pad and site of two geoprobe borings.
26	12/18/96	0910	MM	View of the on-site well house located on the west side of the main access road.
27	12/18/96	0915	MM	Close-up view of the water well inside the well house prior to sampling activities.
28	1/14/97	0825	MM	View of the on-site well casing being removed from the well (a trap door was opened on the roof of the well house to allow for removal).
29	1/14/97	0850	MM	Another view of the water well casing being removed from the well.
30	1/14/97	0910	MM	A Grundfos pump was used to purge the on-site well after the well casing was removed entirely from the well (sampling was performed after the well was properly purged).
31	1/14/97	0930	MM	A view of the well casing removed from the on-site well and placed near the well house (117 feet of casing was pulled from the well).

PHOTOGRAPH IDENTIFICATION SHEET

Camera Serial #: 645492

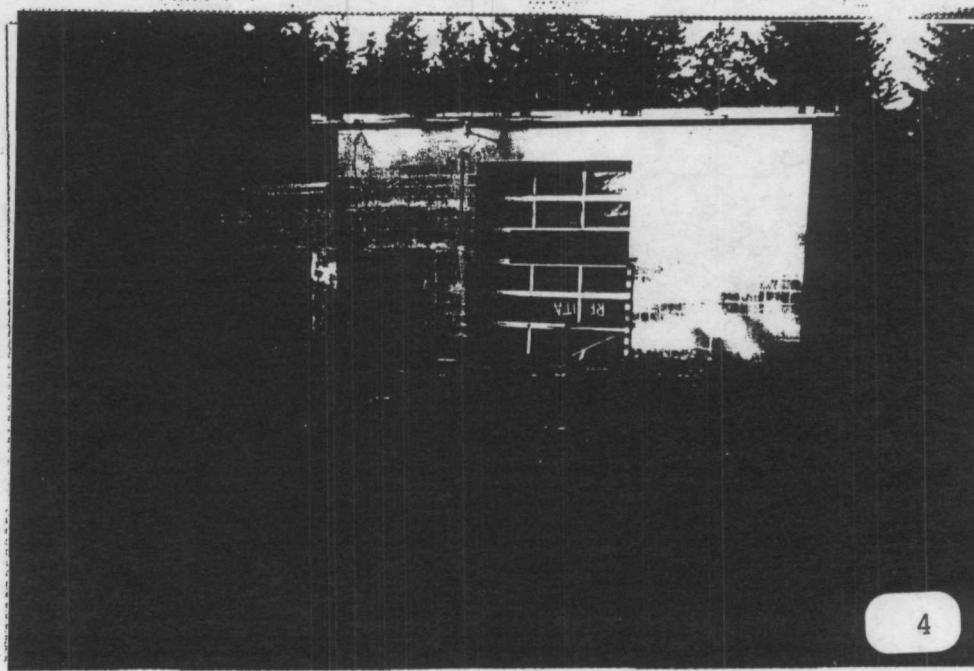
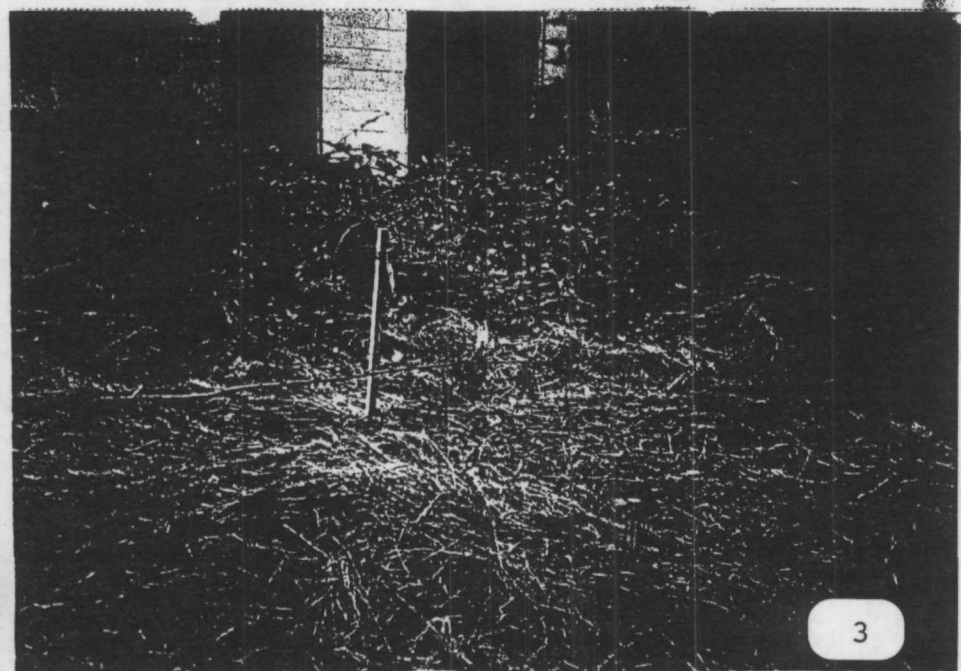
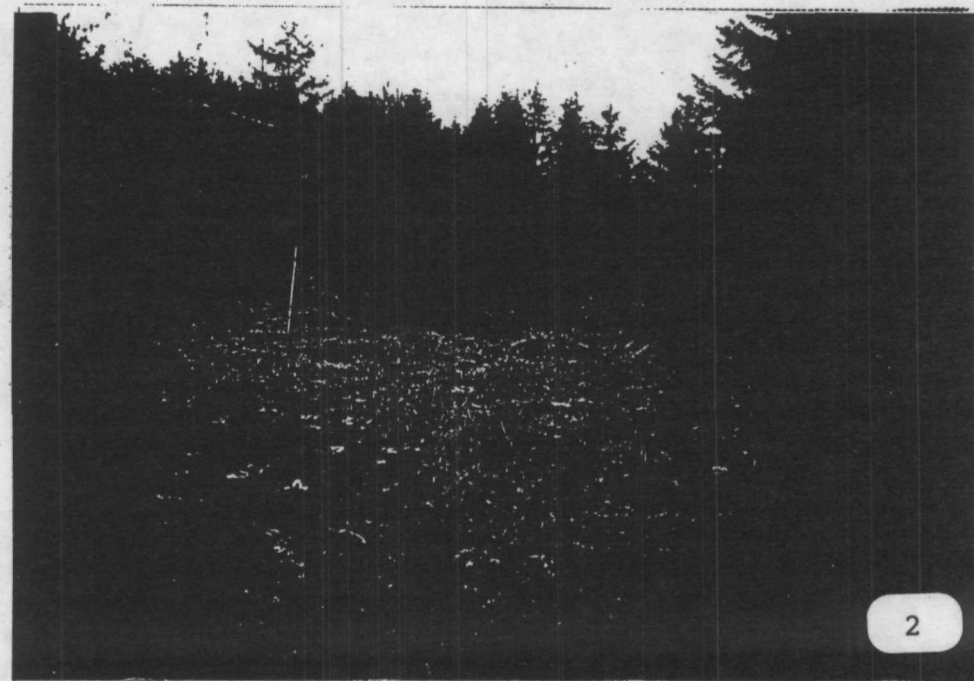
TDD #: 96-11-0007

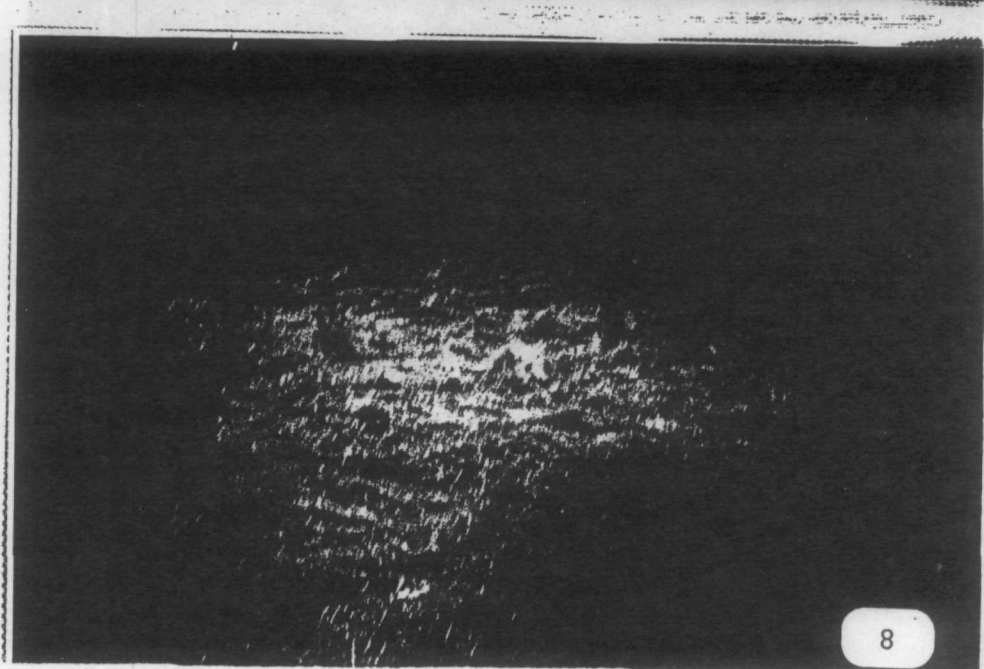
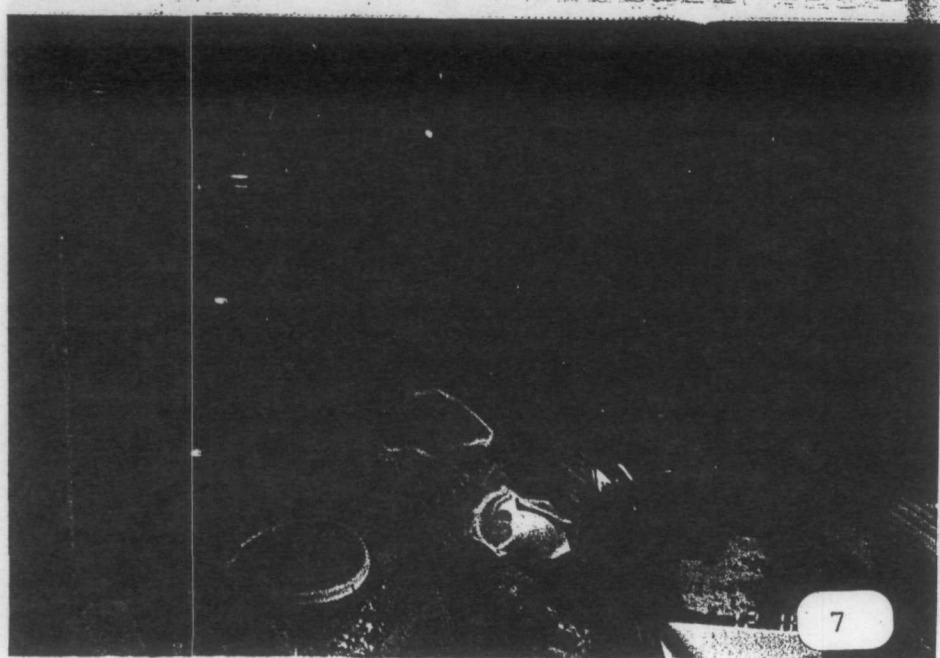
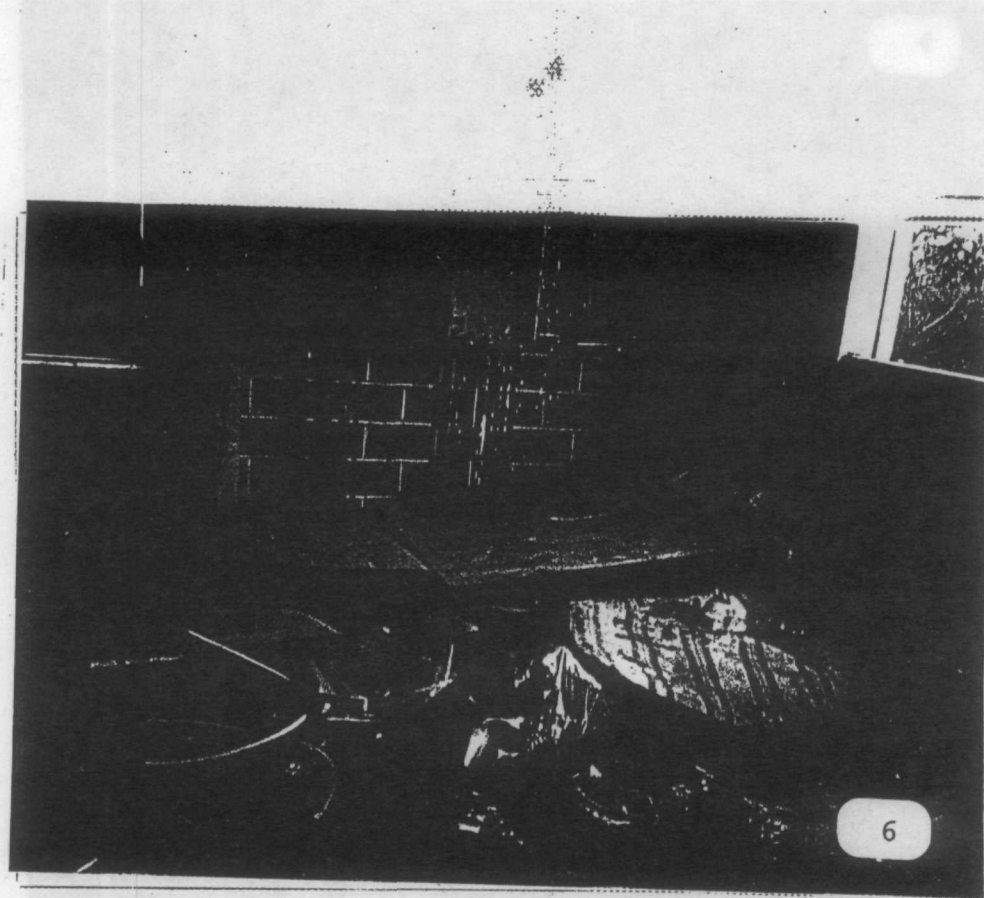
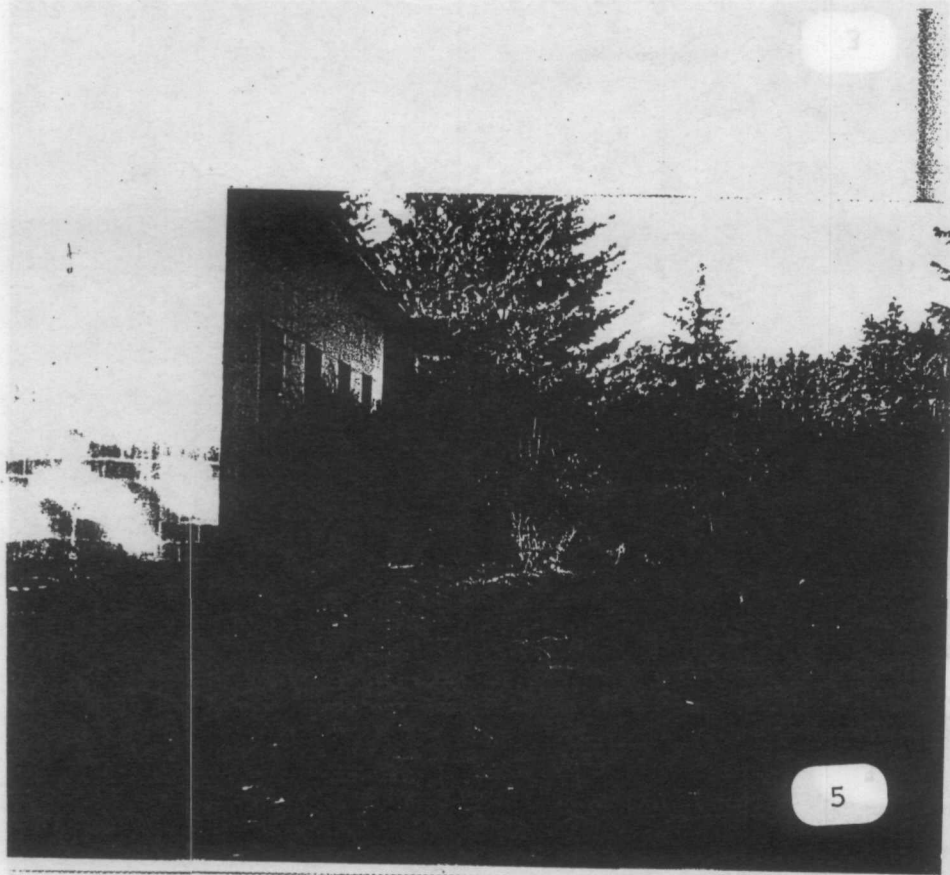
Lens Type: 35mm

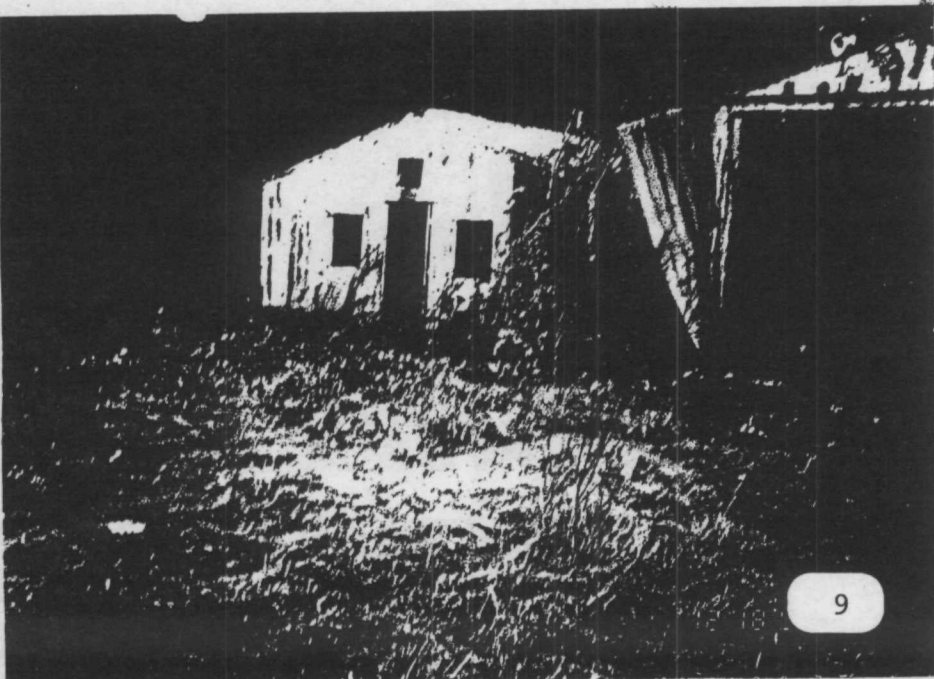
Site Name: Former NIKE Missile Launch Site

Photo No.	Date	Time	By	Description
32	1/14/97	1350	MM	A view of the well following sampling activities. A locked steel well cap was placed on the well to prevent access (keys were left with property owner representatives).
33	1/14/97	0950	MM	A photo of the chain-linked fence that was pulled from its hinges (possibly tampered with) prior to START's arrival for sampling the on-site well.
34	12/18/96	0920	MM	Site of the upgradient (b) (6) sample (DW-1) collected from (b) (6)
35	12/18/96	0930	MM	Site of a downgradient domestic water well sample at the Accumar corporation (DW-2) located near NIKE site (1180 NW Finn Hill Road).
36	12/18/96	0940	MM	Site of domestic water well sample DW-3 located at the (b) (6) on Finn Hill Road northwest of the access road.
37	12/18/96	0950	MM	Site of a downgradient water well sample (DW-4) collected from the (b) (6)
38	12/18/96	1000	MM	Site of domestic water well sample DW-5 at the (b) (6)
39	12/18/96	1015	MM	Site of downgradient water well sample DW-6 located behind the City of Poulsbo Bus barn directly south of the NIKE site.
40	12/18/96	1030	MM	Bus barn water sample taken from outflow from water tank shown at right of photo.

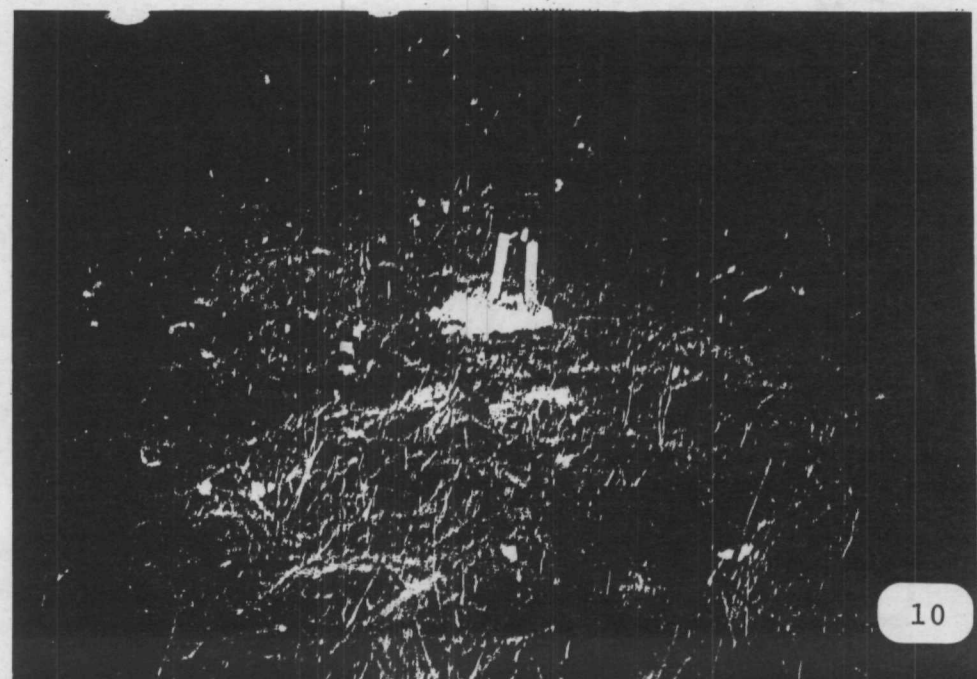
MM = Mike Martin



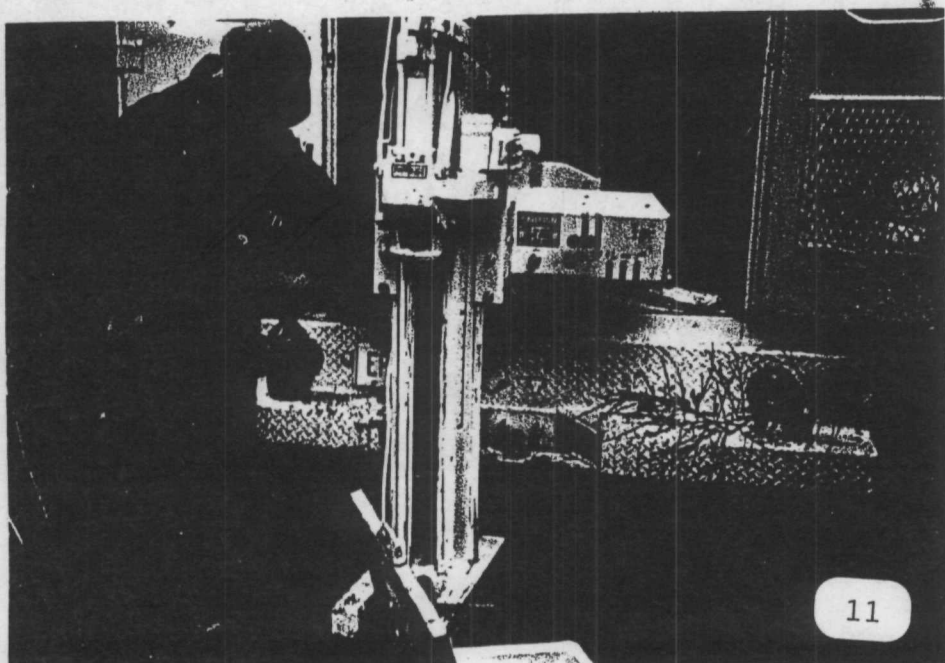




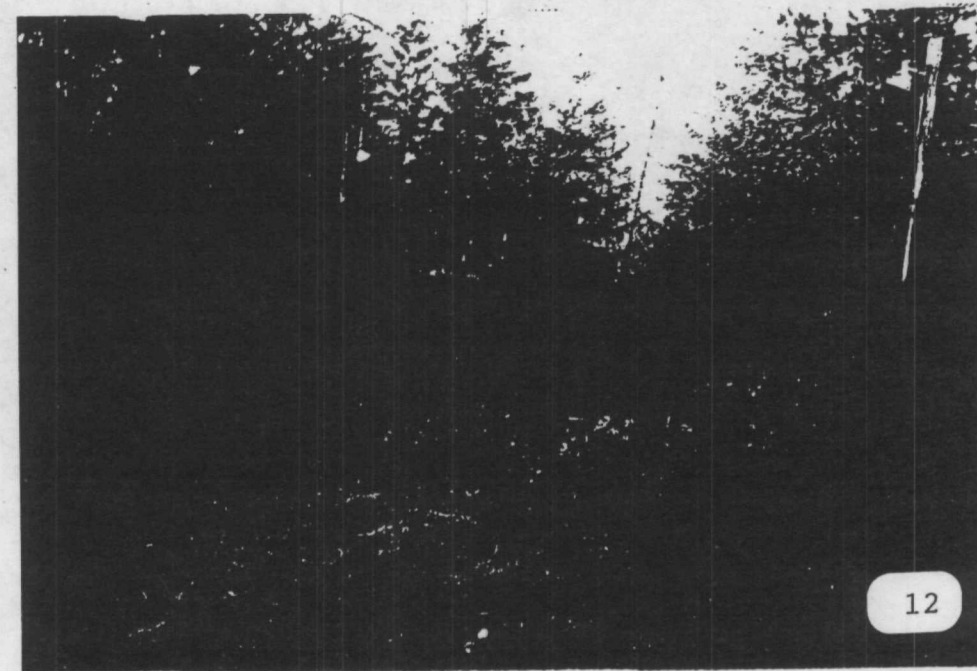
9



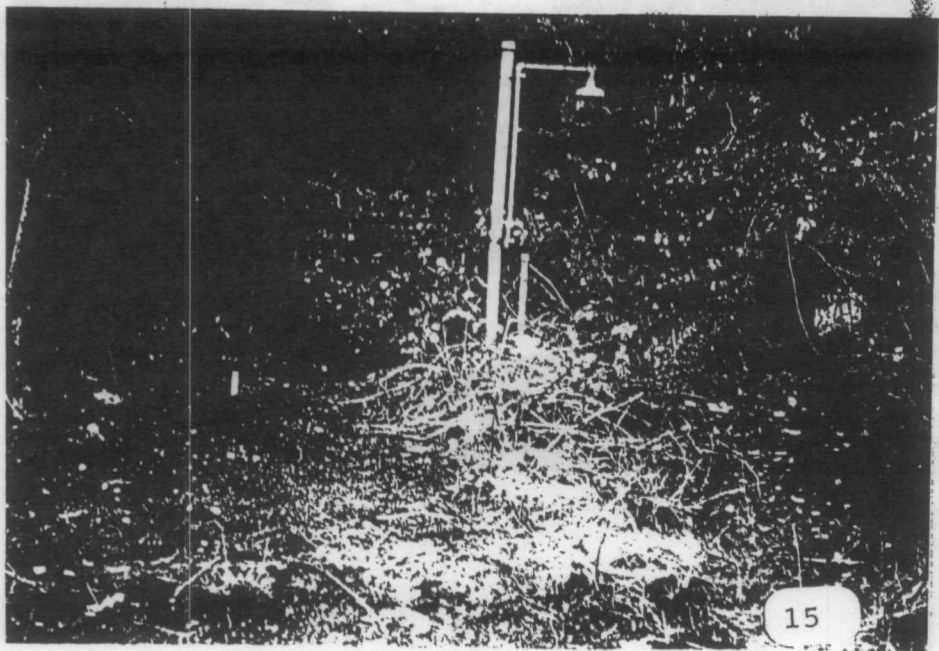
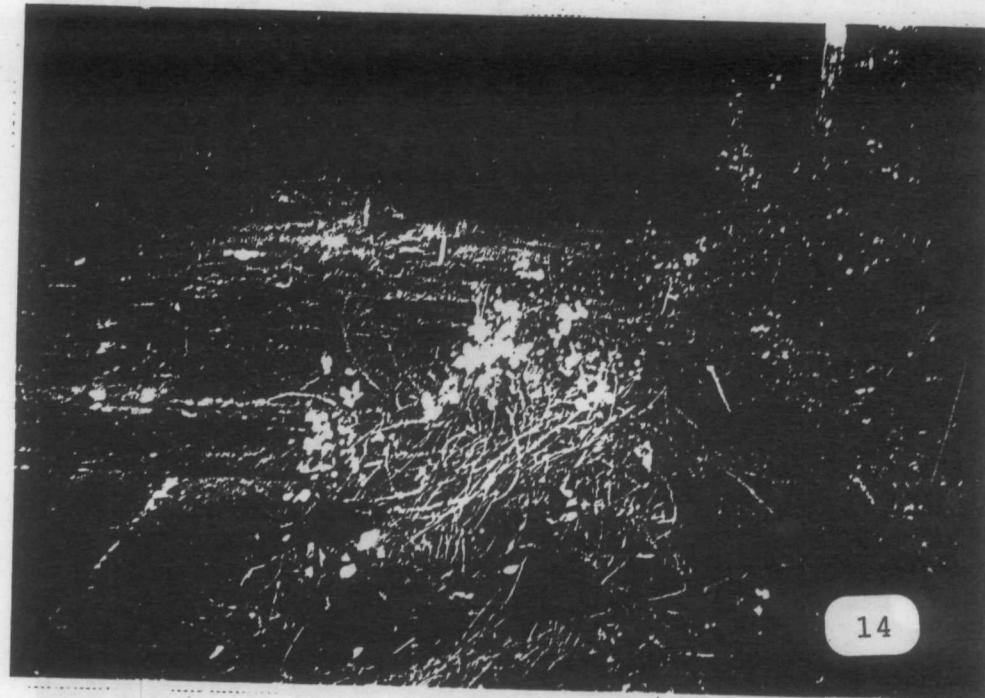
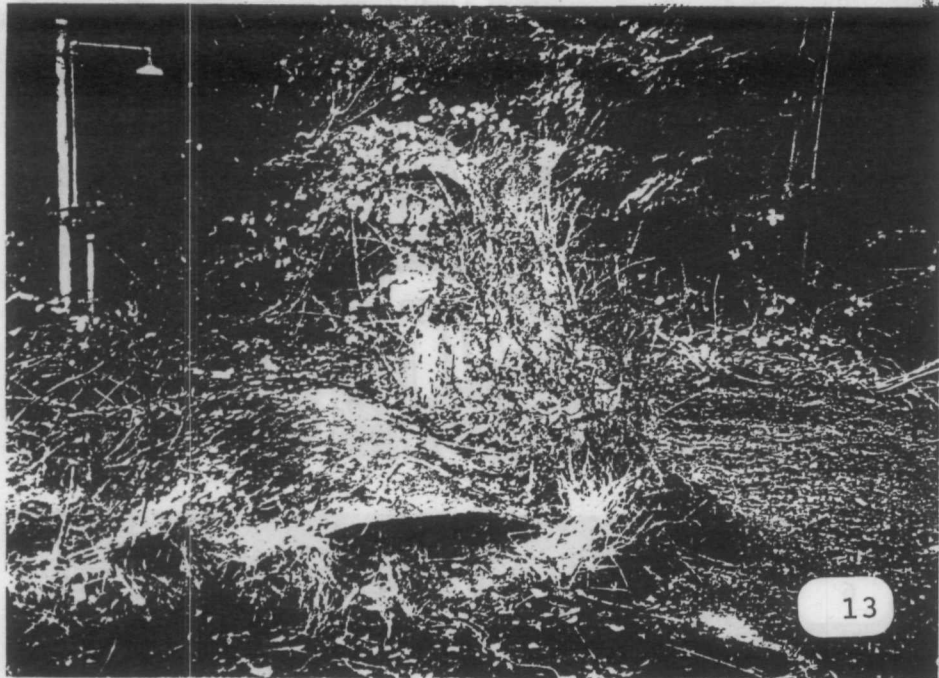
10

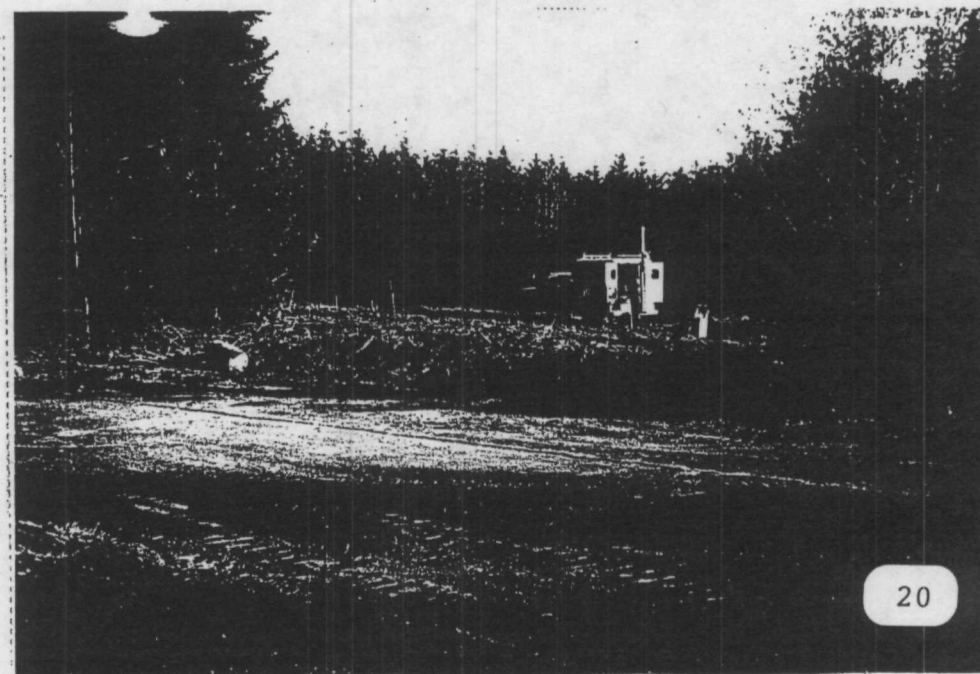
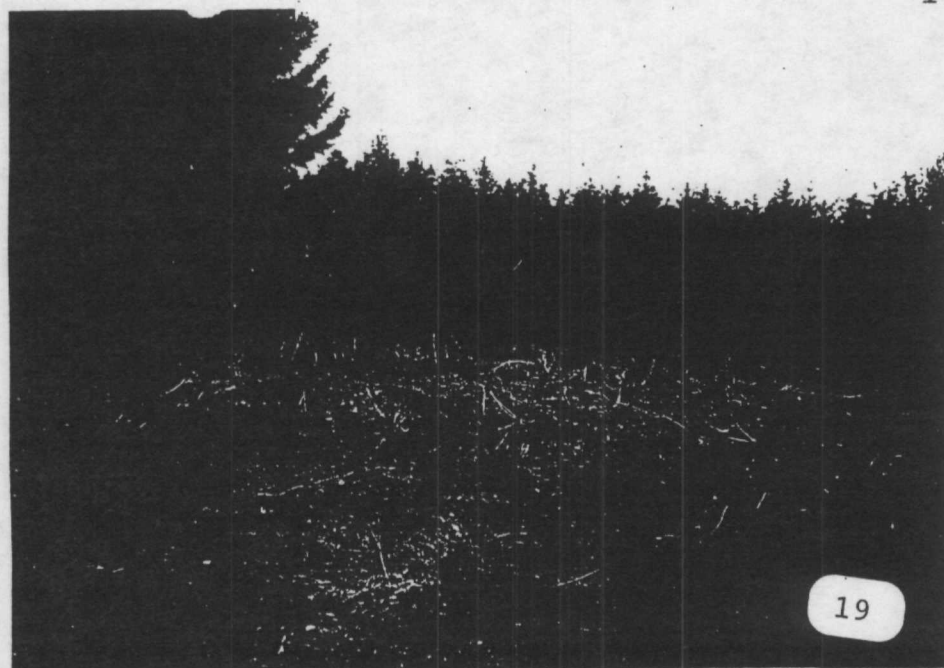
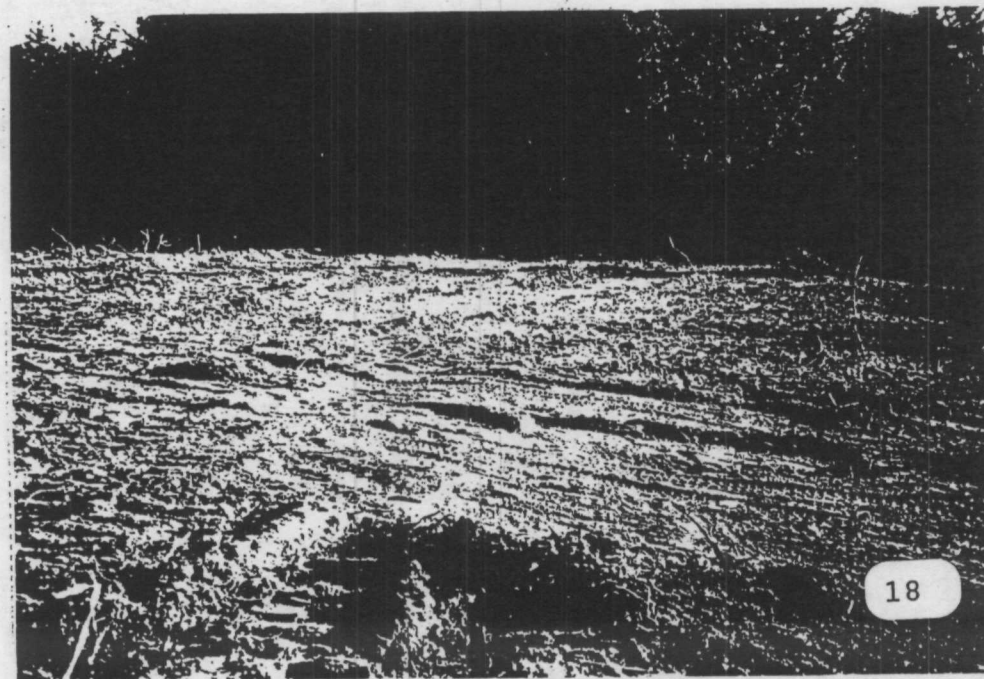
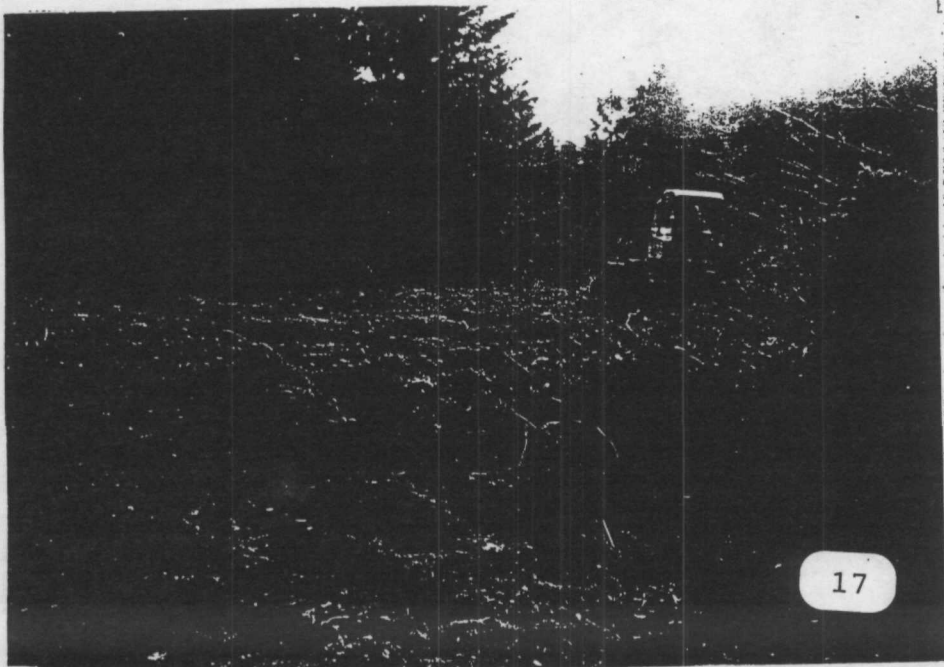


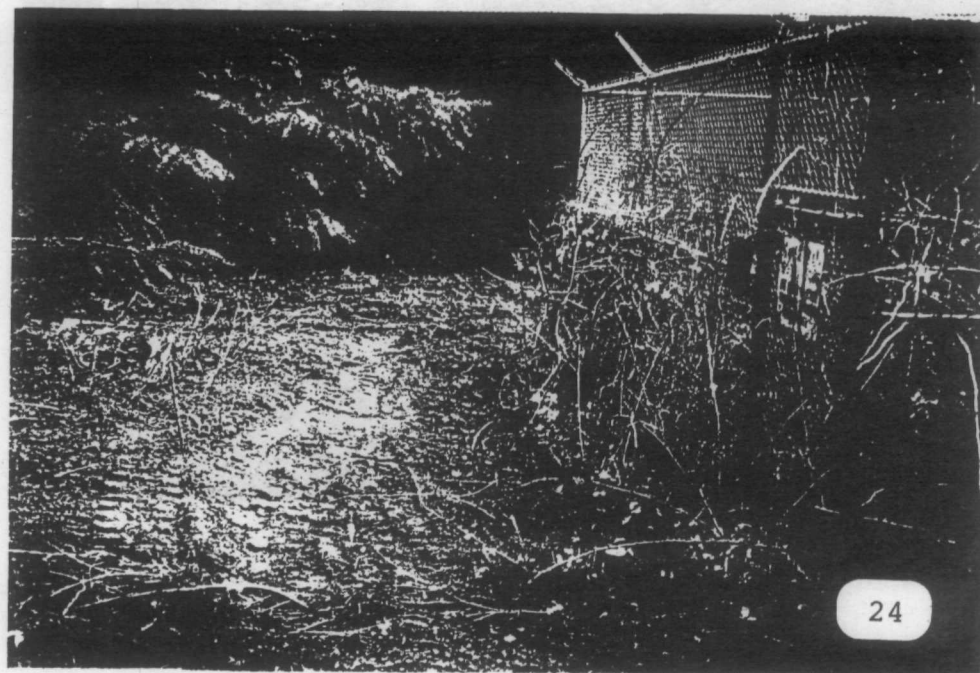
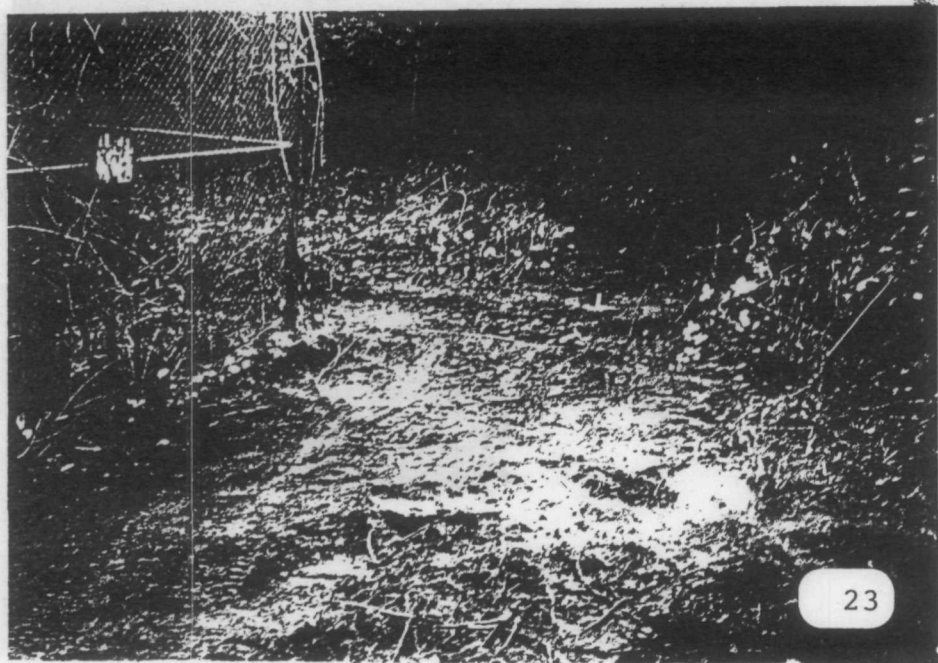
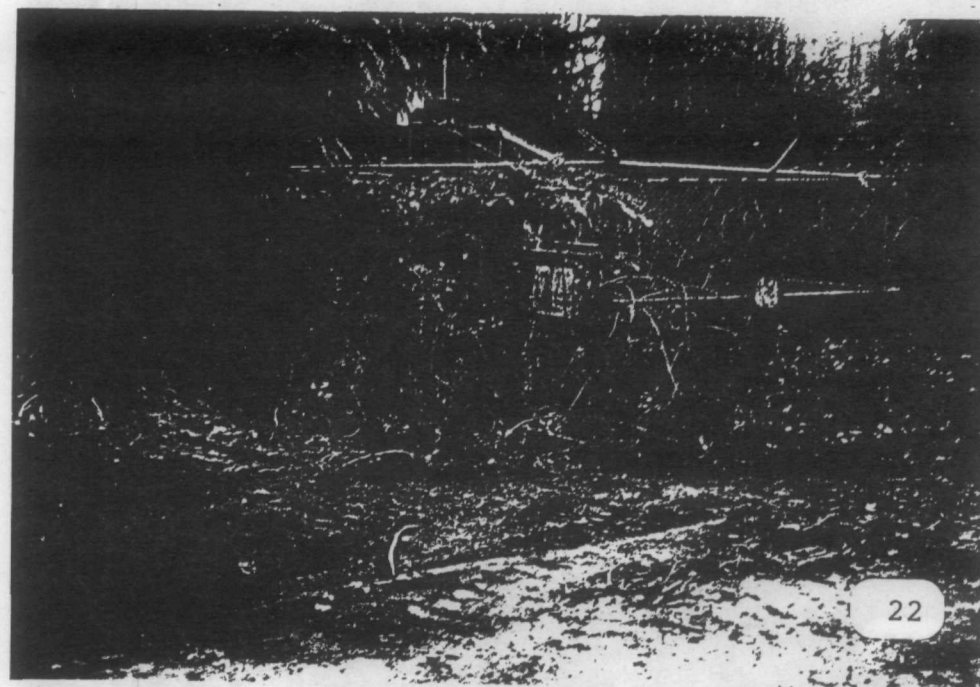
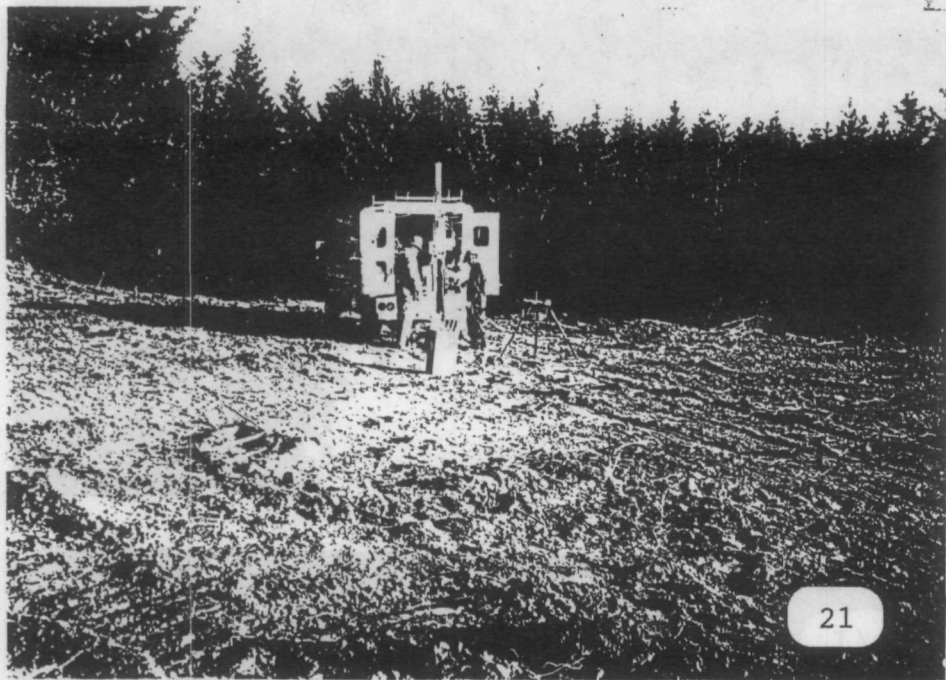
11

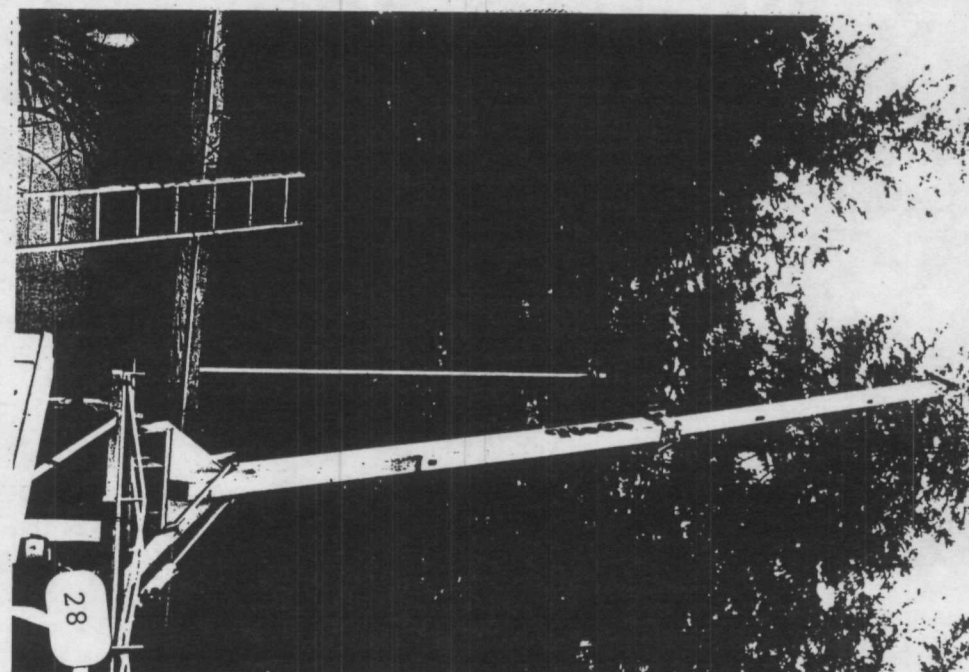
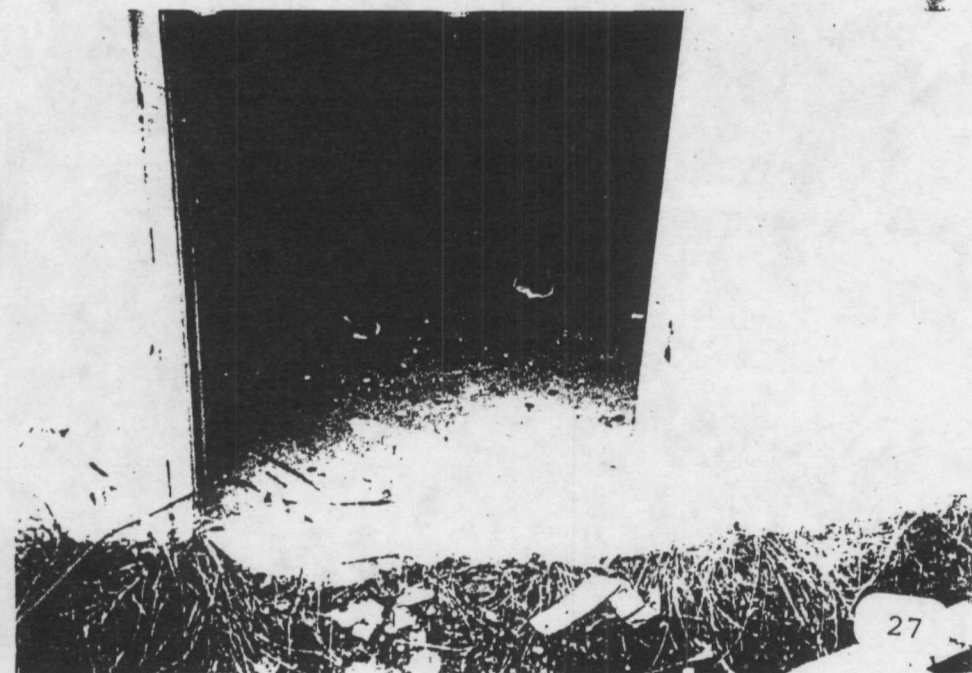
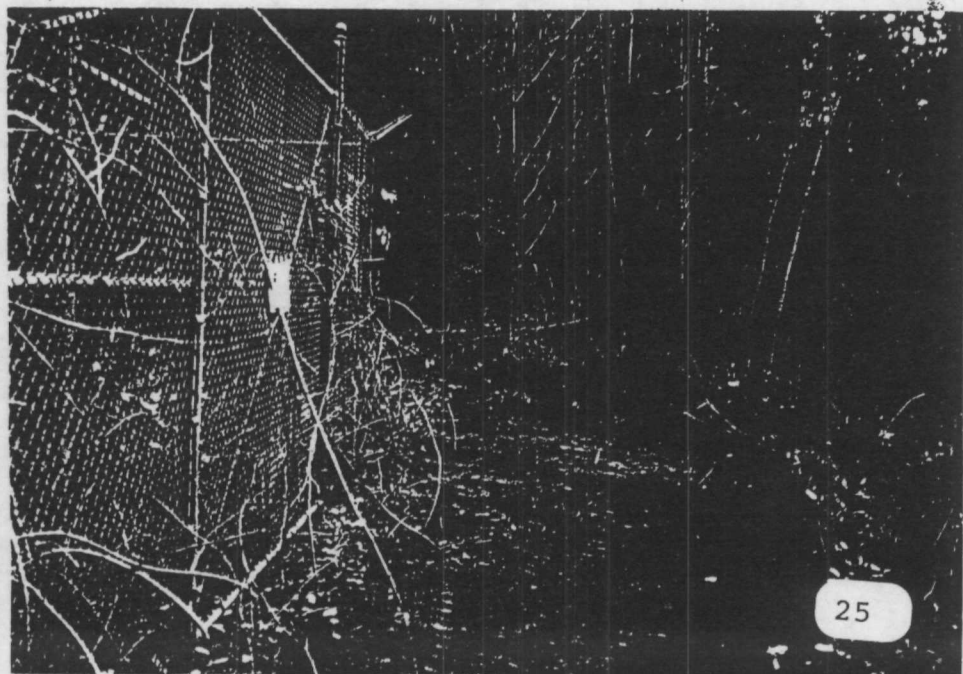


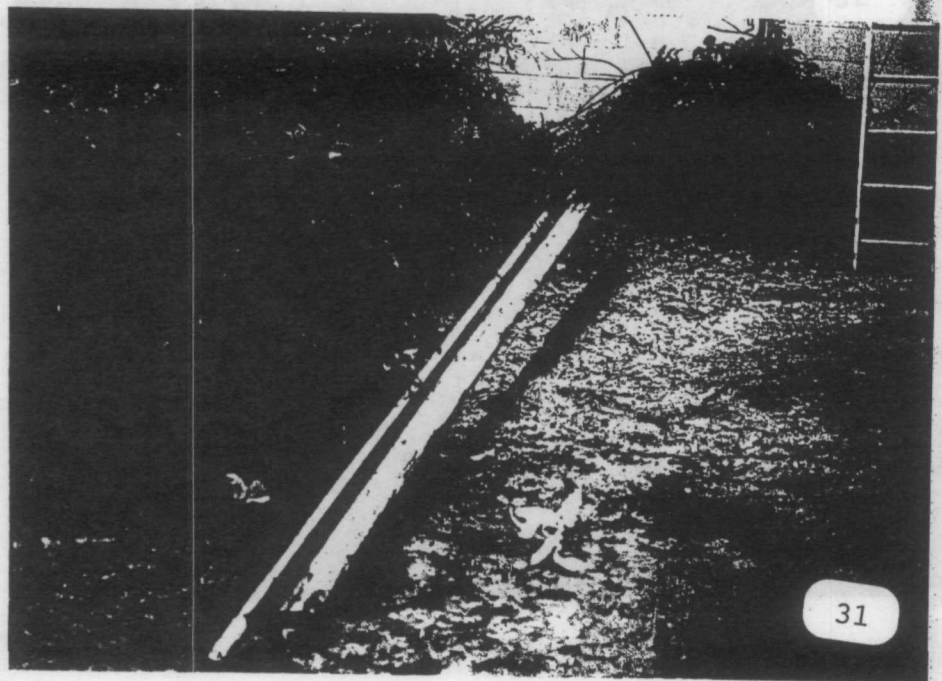
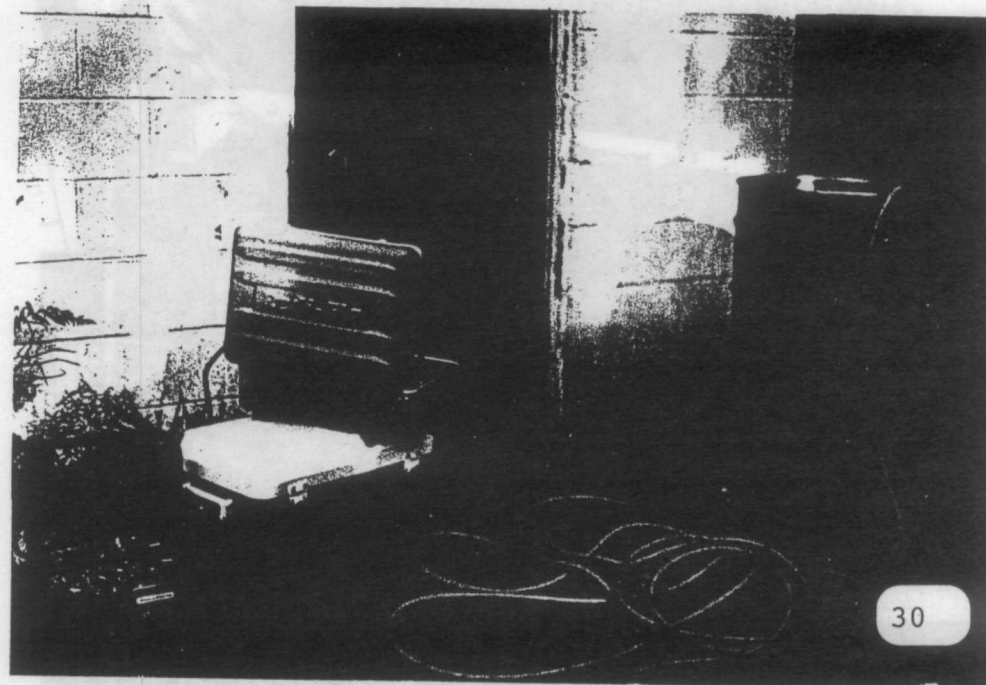
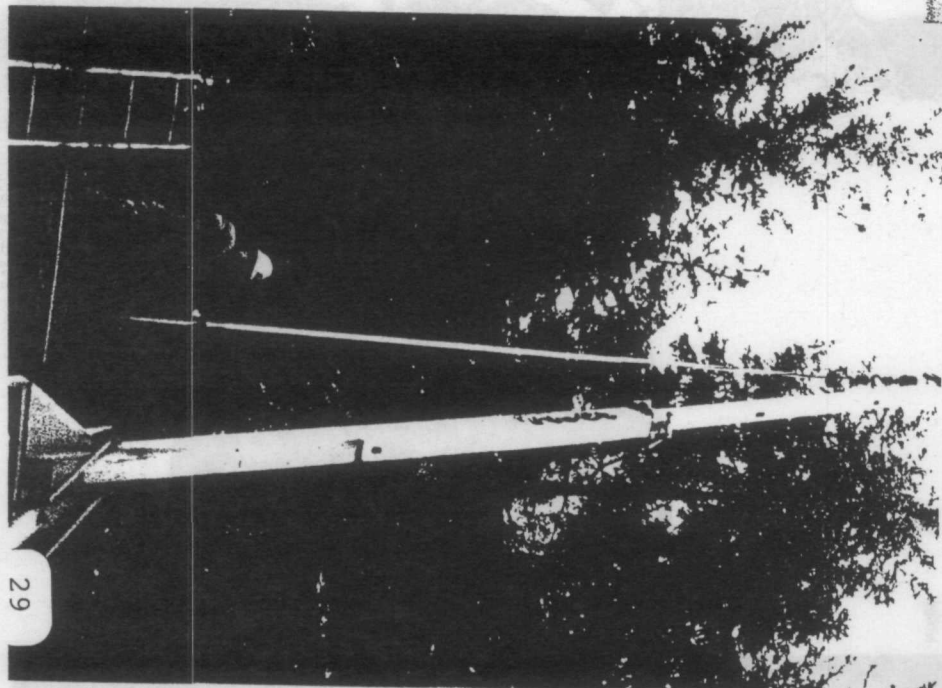
12

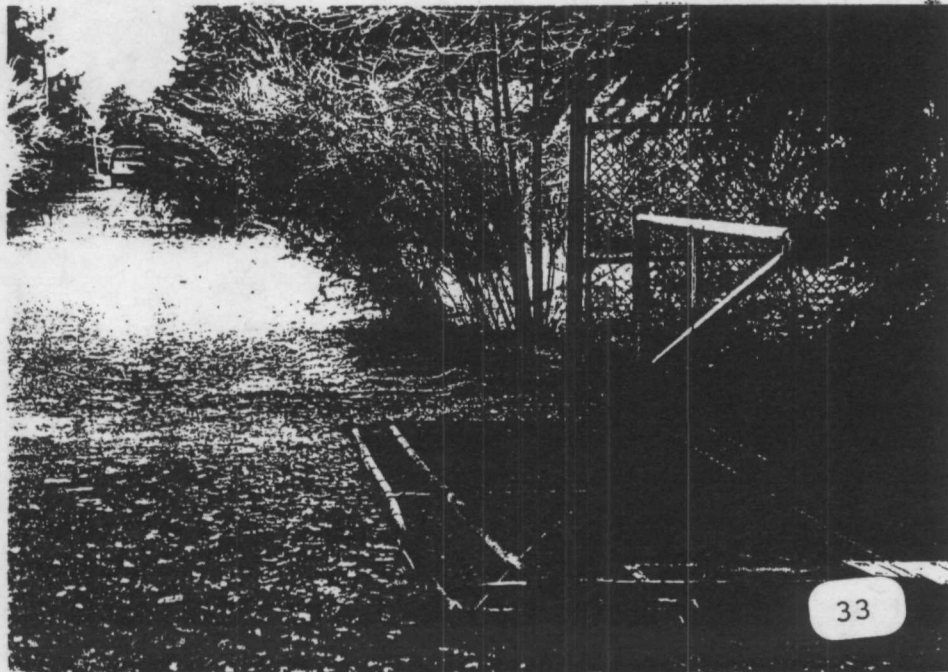




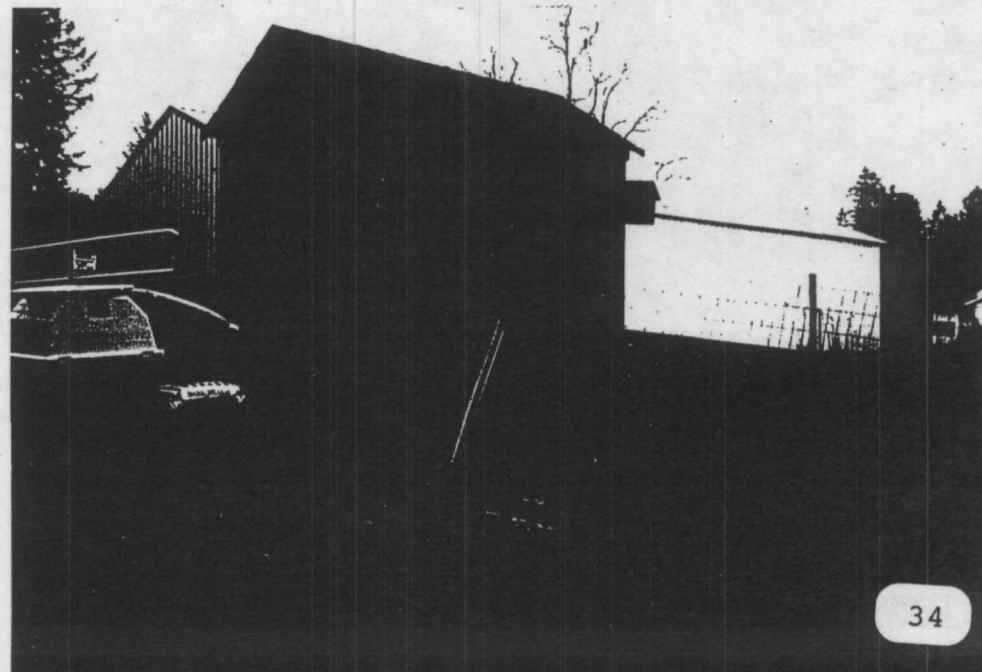








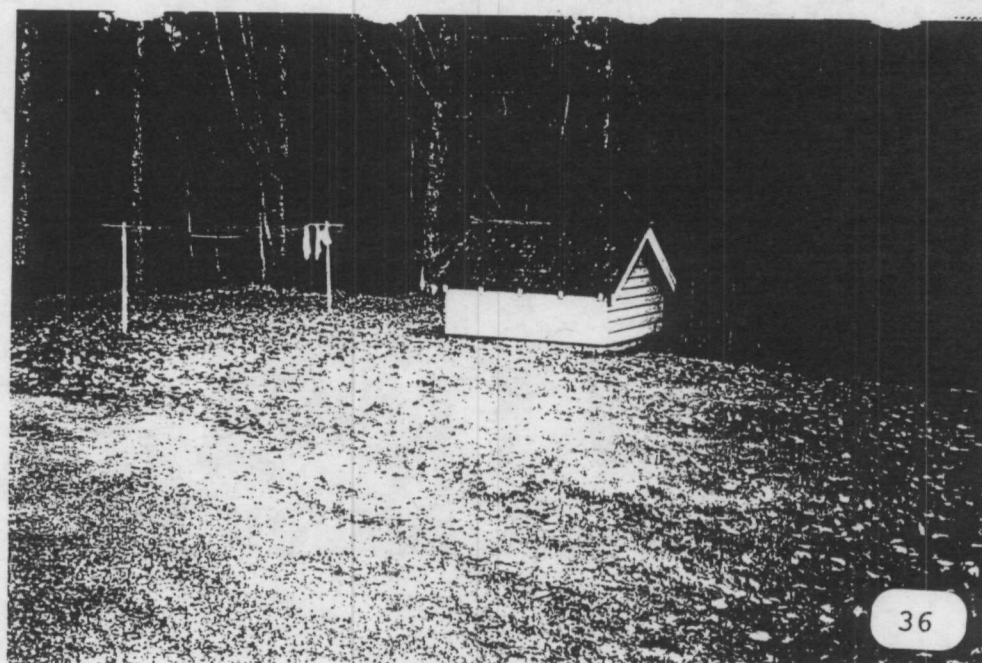
33



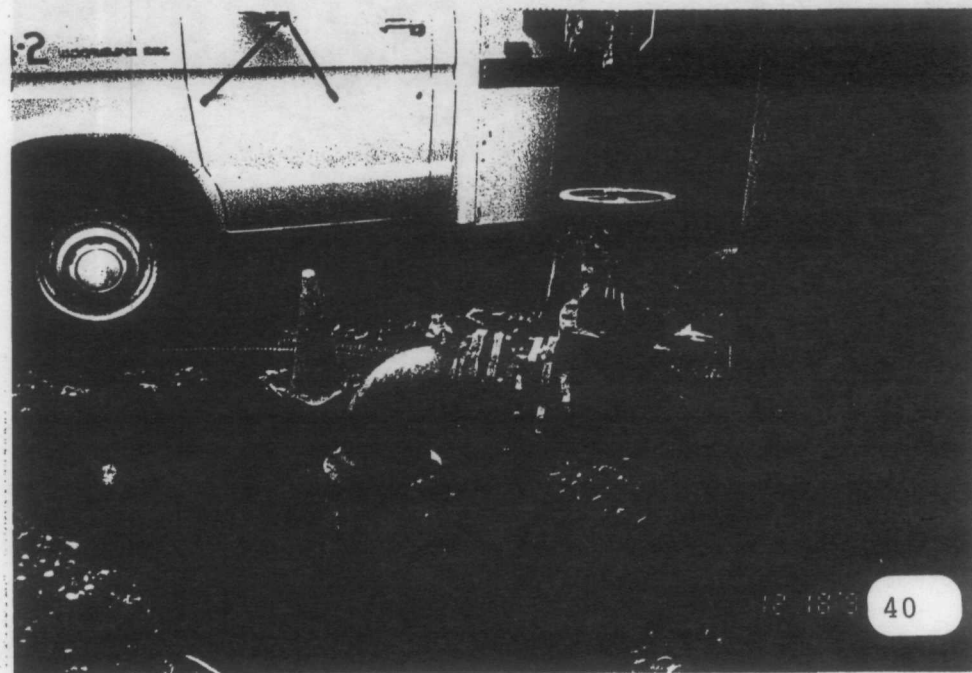
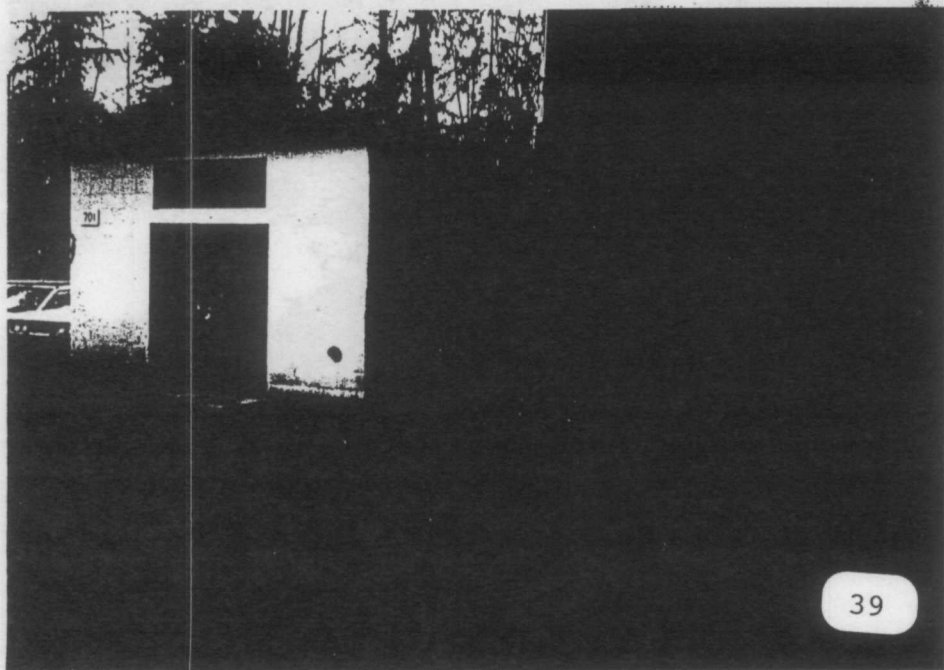
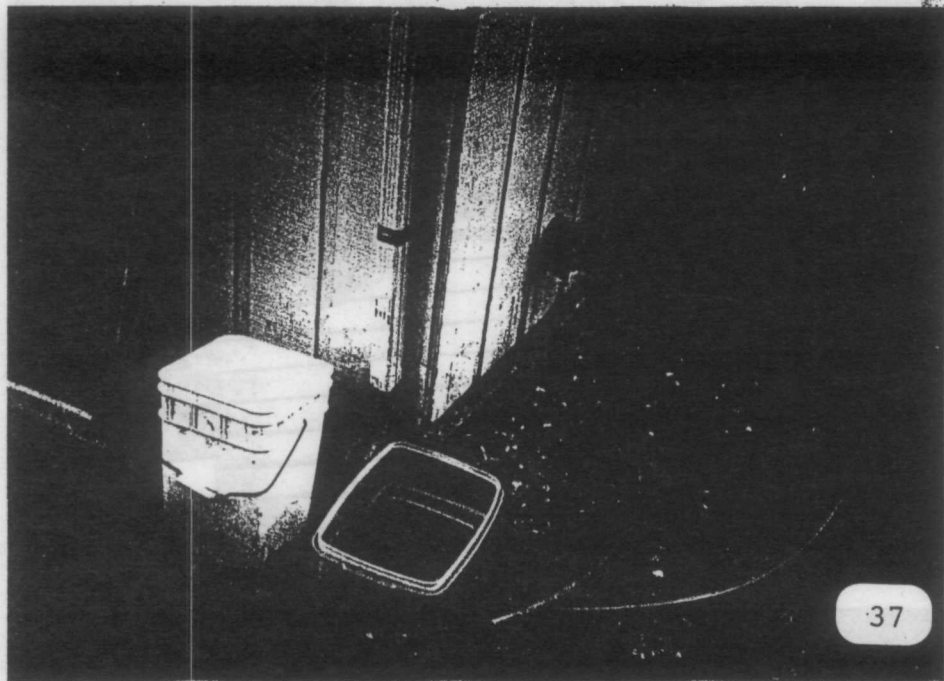
34



35

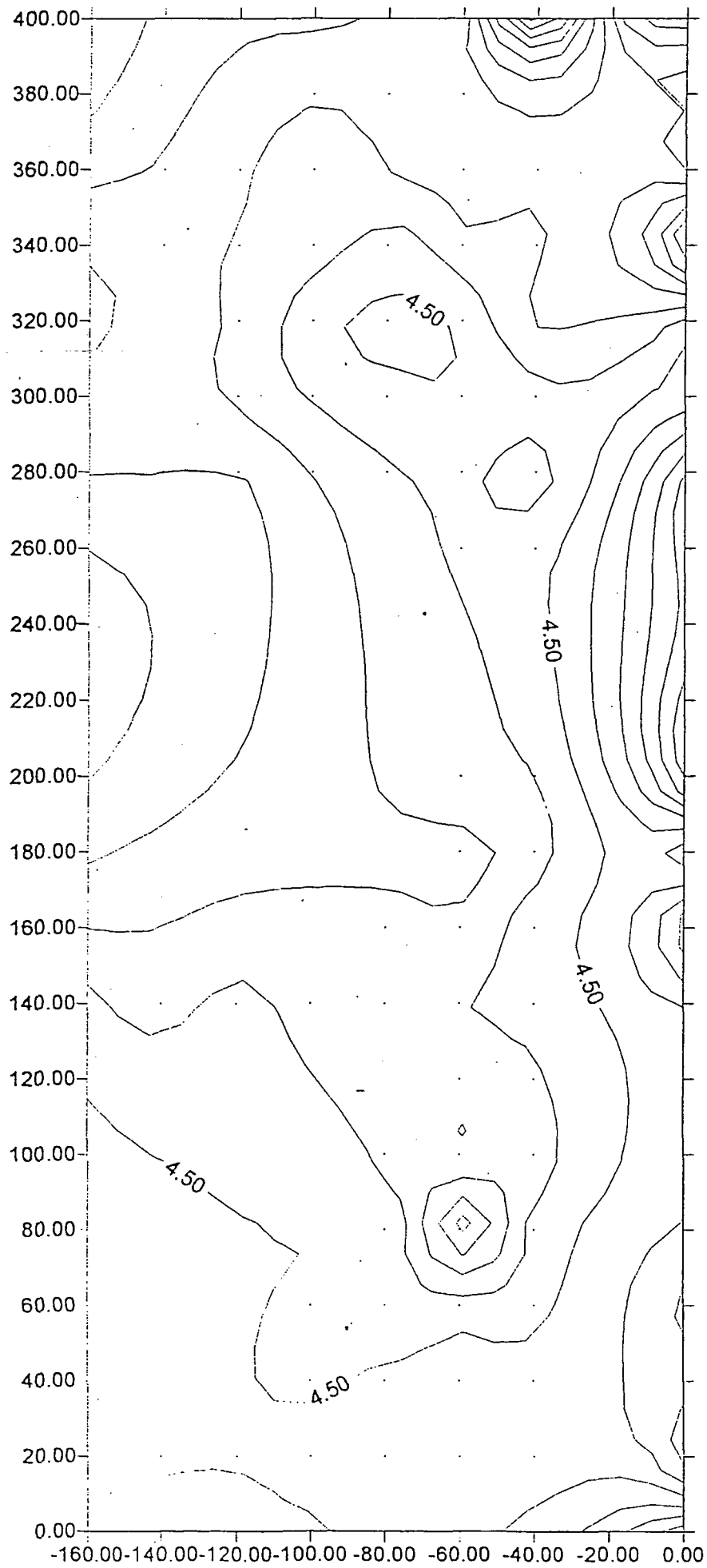


36

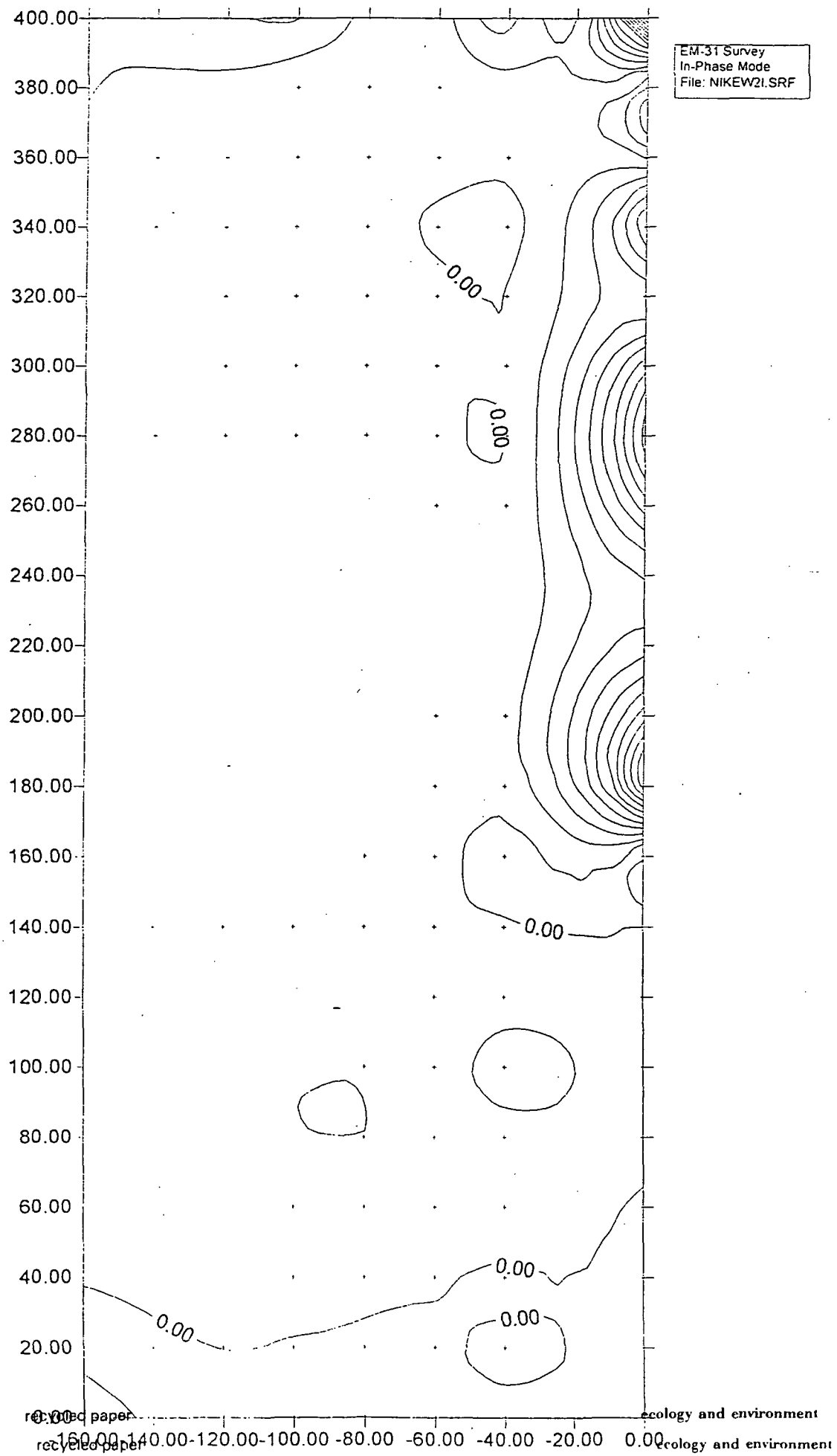


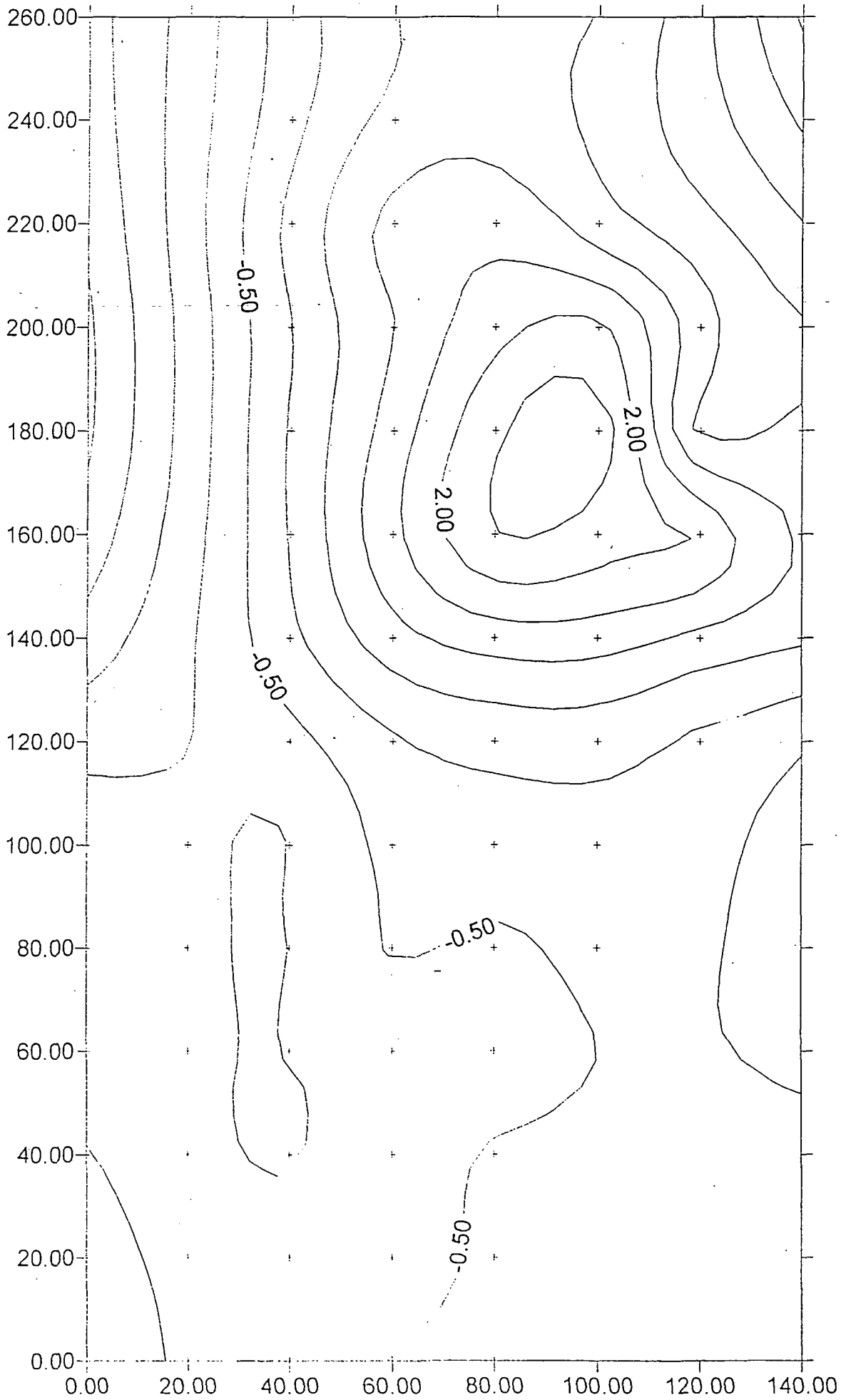
APPENDIX B

EM-31TM INVESTIGATION DATA FORMS



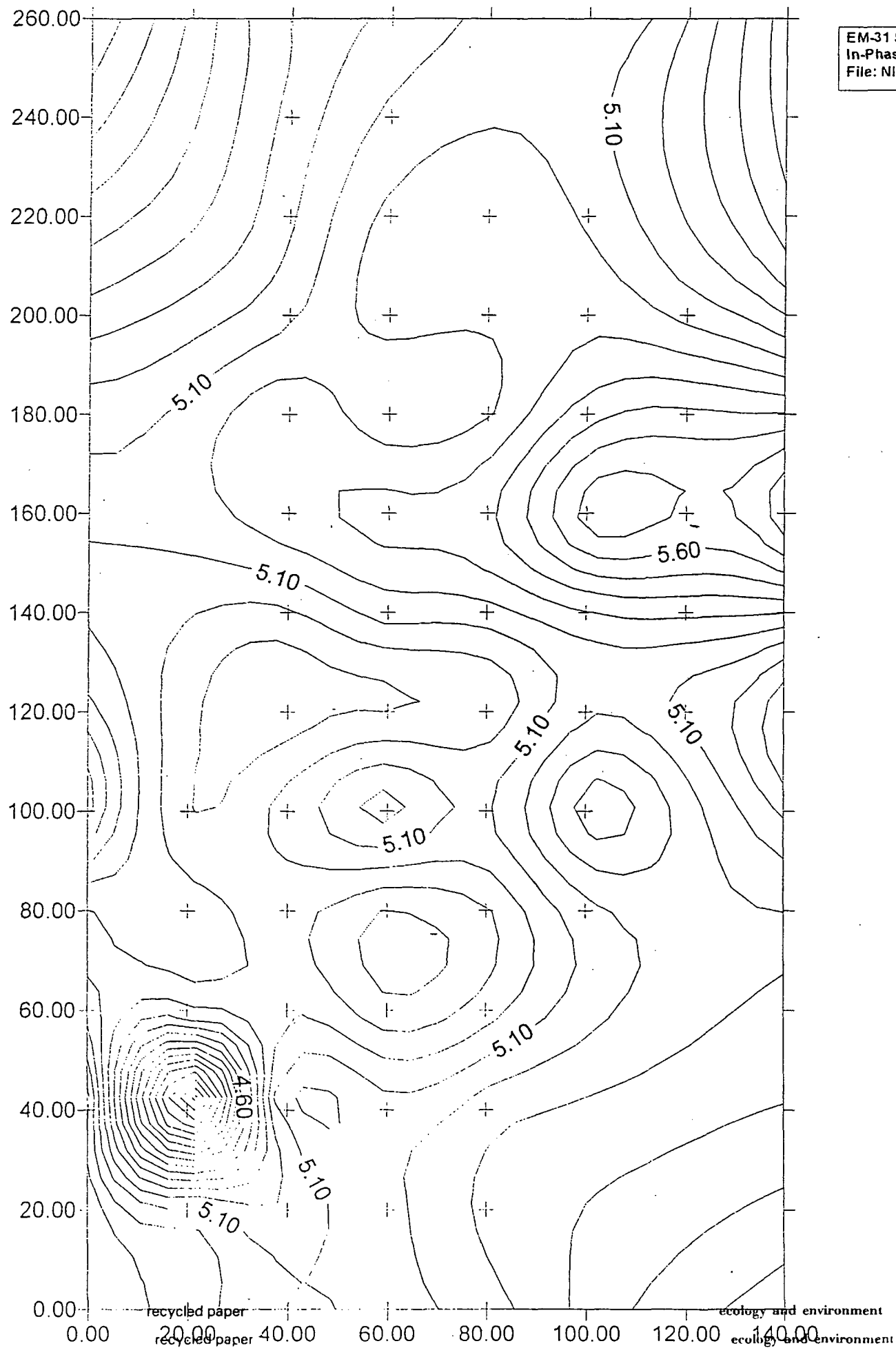
EM-31 Survey
Conductivity
File: NIKEW1.SRF





EM-31 Survey
Conductivity
File: NIKEI1.SRF

EM-31 Survey
In-Phase Mode
File: NIKE412.SRF



APPENDIX C
LABORATORY ANALYTICAL DATA FORMS



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: February 11, 1997

TO: Mike Martin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *mw*

SUBJ: Total Petroleum Hydrocarbon Data Quality Assurance Review,
Former Nike Missile Site, Poulsbo, WA

REF: TDD: 96-11-0007 PAN: AK-07-01-SI-DM

Per the Task Monitor, a data quality assurance review of 11 soil and 10 water samples collected from the Former Nike Missile site in Poulsbo, Washington, was not performed. Total petroleum hydrocarbon (diesel and gasoline ranges) analyses were performed by Columbia Analytical Services, Kelso, WA.

The samples were numbered:

Soil	GP-6C-7	GP8C-7	GP-8C-2	GP-18-4	GP-18-8
	GP-17-9	GP-17-2	GP-2-13	GP-7C-2	GP-7C-7
	GP-6C-2				
Water	GW-RINS	DW-1	DW-2	DW-3	DW-4
	DW-5	DW-6	GW-1	GW-2	GP-2-13

All qualifiers used by the laboratory, including "N" and "O", were kept on the original Form I's. "U" qualifiers were added by the data reviewer to indicate results below the quantitation limit.

Data Qualifiers and Definitions

U - The material was analyzed for but was not detected. The associated numerical value is the estimated sample quantitation limit.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Ecology & Environment, Inc.
Project: 96110007
Sample Matrix: Soil

Service Request: K9608273
Date Collected: 12/16-19/96
Date Received: 12/23/96
Date Extracted: 12/27/96
Date Analyzed: 12/30/96

Total Petroleum Hydrocarbons as Diesel
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte: Diesel
Method Reporting Limit: 25

Sample Name	Lab Code	
GP-6C-7	K9608273-002	ND U
GP-SC-7	K9608273-003	ND ↓
GP-SC-2	K9608273-004	ND ↓
GP-1S-4	K9608273-005	ND ↓
GP-1S-8	K9608273-006	37(N)
GP-17-9	K9608273-007	ND U
GP-17-2	K9608273-008	ND ↓
GP-2-13	K9608273-009	ND ↓
GP-7C-2	K9608273-010	ND ↓
GP-7C-7	K9608273-011	ND ↓
GP-6C-2	K9608273-021	ND ↓
Method Blank	K961227-MB	ND

MN2797

N Quantitated as diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint.

Approved By: *[Signature]*

Date: *1-ecology and environment*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Ecology & Environment, Inc.
Project: 96110007
Sample Matrix: Water

Service Request: K9608273
Date Collected: 12/16-19/96
Date Received: 12/23/96
Date Extracted: 12/24/96
Date Analyzed: 12/30,31/96

Total Petroleum Hydrocarbon as Diesel
Washington DOE Method WTPH-D
Units: $\mu\text{g/L}$ (ppb)

Analyte: Diesel
Method Reporting Limit: 250

Sample Name	Lab Code	
GW-Rins	K9608273-001	ND ✓
DW-1	K9608273-012	ND
DW-2	K9608273-013	ND
DW-3	K9608273-014	ND
DW-4	K9608273-015	ND
DW-5	K9608273-016	ND
DW-6	K9608273-017	ND
GW-1	K9608273-018	ND
GW-2	K9608273-019	322(O) ✓
GP-2-13	K9608273-020	ND
Method Blank	K961224-MB	ND

MW
2-7-97

O

Quantitated as diesel. The sample contained an oil component that partially eluted in the diesel range.

Approved By:

John A. Neuner

Date:

1-10-97

12/30/96

COLUMBIA ANALYTICAL SERVICES, INC.

00006

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Ecology & Environment, Inc.
Project: 96110007
Sample Matrix: Soil

Service Request: K9608273
Date Collected: 12/19/96
Date Received: 12/23/96
Date Extracted: 12/30/96
Date Analyzed: 12/30,31/96

Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name	Lab Code	MRL	Result
GP-6C-7	K9608273-002	5	ND
GP-8C-7	K9608273-003	5	ND
GP-8C-2	K9608273-004	5	ND
GP-1S-4	K9608273-005	5	ND
GP-1S-8	K9608273-006	5	ND
GP-17-9	K9608273-007	5	ND
GP-17-2	K9608273-008	5	ND
GP-2-13	K9608273-009	5	ND
GP-7C-2	K9608273-010	5	ND
GP-7C-7	K9608273-011	5	ND
GP-6C-2	K9608273-021	5	ND
Method Blank	K9612/30-MB	5	ND

MMW
2797

Approved By:


recycled paper

Date:

1/8/97

AVAIL 12/28/96

recycled paper

ecology and environment



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue

Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9332

MEMORANDUM

DATE: February 6, 1997

TO: Mike Martin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *MW*

SUBJ: Inorganic Data Quality Assurance Review, Former Nike Missile Site, Poulsbo, WA

REF: TDD: 96-11-0007 PAN: AK-07-01-SI-DM

The data quality assurance review of 14 soil samples collected from the Former Nike Missile site in Poulsbo, Washington, has been completed. Inorganic analyses were performed by Southwest Laboratory of Oklahoma, Broken Arrow, OK.

The following change was made to the original data validation report:

The "B" flags, indicating a concentration above the instrument detection limit but below the contract required detection limit, were deleted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

RECEIVED
JAN 14 1997
Environmental Cleanup Office

January 10, 1997

REPLY TO
ATTN OF: OEA-095

MEMORANDUM

SUBJECT: Data Validation for Nike Missile Launch Site, Case # 25253,
Sample Delivery Group (SDG) MJM864, Metals analysis

FROM: Donald Matheny, Chemist *DM*
Quality Assurance & Data Unit, OEA

TO: Mark Ader, Site Assessment Manager
Office of Environmental Cleanup

The data validation of metals analysis for the above sample delivery group (SDG) is complete. 14 soil samples were analyzed for metals by Southwest Laboratory of Oklahoma Inc., Broken Arrow, OK. Sample numbers for this SDG are as follows:

MJM864	MJM865	MJM866	MJM867	MJM868
MJM869	MJM871	MJM872	MJM873	MJM874
MJM875	MJM876	MJM877	MJM878	

DATA QUALIFICATIONS

The following comments refer to the laboratory's performance in meeting quality control specifications outlined in the "CLP Statement of Work (CLP-SOW) for Inorganic Analysis, ILMO4.0", and the "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA-540/R-94-013". Data qualifications presented herein are based on the information provided for the review.

1.0 TIMELINESS - Acceptable

The holding time from the date of collection to the date of digestion and analyses were met for all metals (180 days, mercury 28 days). Sample collection and analysis dates are provided below. Cooler temperature was 6°C upon receipt at the laboratory.

Sample Number	Sample Date	Dates of Analyses	
		ICP	Mercury
MJM864	12/16/96	12/28/96	12/30/96
MJM865	12/16/96	12/28/96	12/30/96
MJM866	12/18/96	12/28/96	12/30/96
MJM867	12/18/96	12/28/96	12/30/96
MJM868	12/16/96	12/28/96	12/30/96
MJM869	12/16/96	12/28/96	12/30/96
MJM871	12/16/96	12/28/96	12/30/96
MJM872	12/16/96	12/28/96	12/30/96
MJM873	12/17/96	12/28/96	12/30/96
MJM874	12/17/96	12/28/96	12/30/96
MJM875	12/17/96	12/28/96	12/30/96
MJM876	12/17/96	12/28/96	12/30/96
MJM877	12/17/96	12/28/96	12/30/96
MJM878	12/17/96	12/28/96	12/30/96

2.0 INSTRUMENT CALIBRATION/VERIFICATION - Acceptable

For ICP-AES analysis, instrument calibration was performed with a blank and single calibration standard for each element. Recoveries for verification standards (96-106%) met the frequency (10%) and recovery (90-110%) requirements. CRDL standards were analyzed at the required frequency (5%) and concentrations.

For mercury analysis, the instrument was calibrated with a blank and five standards with a resulting correlation coefficient 0.999 (criterion: ≥ 0.995). Recoveries for verification standards (93-101%) met the frequency (10%) and recovery (80-120%) criteria. A CRDL standard was analyzed at the required 0.2 ppb concentration.

3.0 ICP-AES INTERFERENCE CHECK SAMPLE (ICS) - Acceptable

Percent recoveries for the ICS (86-113%) met the 80-120% recovery criterion and the 5% frequency requirements for analysis. No interferences are suspected based upon ICS performance and indigenous element concentrations.

4.0 LABORATORY CONTROL SAMPLES (LCS) - Acceptable

All metals results for the LCS were within the established control limits for soils.

5.0 BLANKS - Acceptable

Results for all blanks were non-detected or below a factor of 5 times that found in associated samples.

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM864

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.07

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____78.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17000	-		p
7440-36-0	Antimony	0.77	U	NIJ	p
7440-38-2	Arsenic	2.1	B		p
7440-39-3	Barium	97.9			p
7440-41-7	Beryllium	0.33	B		p
7440-43-9	Cadmium	0.26	U		p
7440-70-2	Calcium	2450	-		p
7440-47-3	Chromium	20.8	-		p
7440-48-4	Cobalt	7.6	B		p
7440-50-8	Copper	9.3	-		p
7439-89-6	Iron	15100	-		p
7439-92-1	Lead	5.3	-		p
7439-95-4	Magnesium	2940	-		p
7439-96-5	Manganese	572	-		p
7439-97-6	Mercury	0.17	-	*	CV
7440-02-0	Nickel	29.9	-		p
7440-09-7	Potassium	326	B		p
7782-49-2	Selenium	1.0	U	N	p
7440-22-4	Silver	0.26	U		p
7440-23-5	Sodium	261	B		p
7440-28-0	Thallium	1.2	B		p
7440-62-2	Vanadium	40.5	-		p
7440-66-6	Zinc	42.0	-	*	p

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM865

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.08

Level (low/med): LOW_____ Date Received: 12/21/96

% Solids: _____ 89.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000	-		P
7440-35-0	Antimony	0.67	U	X	P
7440-38-2	Arsenic	1.9	B		P
7440-39-3	Barium	38.1	B		P
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	1360	-		P
7440-47-3	Chromium	21.2	-		P
7440-48-4	Cobalt	6.8	B		P
7440-50-8	Copper	68.1	-		P
7439-89-6	Iron	14400	-		P
7439-92-1	Lead	1.9	-		P
7439-95-4	Magnesium	4680	-		P
7439-96-5	Manganese	209	-		P
7439-97-6	Mercury	0.11	U	X	CV
7440-02-0	Nickel	30.4	-		P
7440-09-7	Potassium	412	B		P
7782-49-2	Selenium	1.1	B	X	P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	248	B		P
7440-28-0	Thallium	0.45	U		P
7440-62-2	Vanadium	38.5	-		P
7440-66-6	Zinc	21.4	-	X	P

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM866

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM864

Matrix (soil/water): SOIL Lab Sample ID: 28060.09

Level (low/med): LOW Date Received: 12/21/96

Solids: 85.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17300	-		p
7440-36-0	Antimony	0.88	B	X J	p
7440-38-2	Arsenic	2.5	-		p
7440-39-3	Barium	74.3	-		p
7440-41-7	Beryllium	0.37	B		p
7440-43-9	Cadmium	0.65	B		p
7440-70-2	Calcium	2370	-		p
7440-47-3	Chromium	44.4	-		p
7440-48-4	Cobalt	19.8	-		p
7440-50-8	Copper	12.5	-		p
7439-89-6	Iron	22100	-		p
7439-92-1	Lead	4.2	-		p
7439-95-4	Magnesium	18300	-		p
7439-96-5	Manganese	359	-		p
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	271	-		p
7440-09-7	Potassium	431	B		p
7782-49-2	Selenium	1.2	-	X J	p
7440-22-4	Silver	0.23	U		p
7440-23-5	Sodium	267	B		p
7440-28-0	Thallium	1.3	B		p
7440-62-2	Vanadium	37.6	-		p
7440-66-6	Zinc	28.8	-		p

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM867

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOX Case No.: 25253 SAS No.: SDG No.: MJM864

Matrix (soil/water): SOIL Lab Sample ID: 28060.10

Level (low/med): LOW Date Received: 12/21/96

Solids: 83.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8800	-		P
7440-36-0	Antimony	0.72	U	X UJ	P
7440-38-2	Arsenic	1.7	B		P
7440-39-3	Barium	27.2	B		P
7440-41-7	Beryllium	0.24	U		P
7440-43-9	Cadmium	0.24	U		P
7440-70-2	Calcium	2400	-		P
7440-47-3	Chromium	21.3	-		P
7440-48-4	Cobalt	5.9	B		P
7440-50-8	Copper	8.7	-		P
7439-89-6	Iron	11300	-		P
7439-92-1	Lead	1.3	-		P
7439-95-4	Magnesium	4100	-		P
7439-96-5	Manganese	160	-		P
7439-97-6	Mercury	0.12	U	X	CV
7440-02-0	Nickel	32.6	-		P
7440-09-7	Potassium	284	B		P
7782-49-2	Selenium	0.95	U	X	P
7440-22-4	Silver	0.24	U		P
7440-23-5	Sodium	271	B		P
7440-28-0	Thallium	0.54	B		P
7440-62-2	Vanadium	32.0	-		P
7440-66-6	Zinc	16.3	-	X	P

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM868

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.11

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____ 89.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18200	—	—	p
7440-36-0	Antimony	0.67	U	—	p
7440-38-2	Arsenic	2.3	—	—	p
7440-39-3	Barium	76.6	—	—	p
7440-41-7	Beryllium	0.29	B	—	p
7440-43-9	Cadmium	0.22	U	—	p
7440-70-2	Calcium	2910	—	—	p
7440-47-3	Chromium	29.6	—	—	p
7440-48-4	Cobalt	8.8	B	—	p
7440-50-8	Copper	13.8	—	—	p
7439-39-6	Iron	17000	—	—	p
7439-92-1	Lead	3.1	—	—	p
7439-95-4	Magnesium	4340	—	—	p
7439-96-5	Manganese	243	—	—	p
7439-97-6	Mercury	0.11	U	—	CV
7440-02-0	Nickel	39.3	—	—	p
7440-09-7	Potassium	480	B	—	p
7782-49-2	Selenium	0.90	U	—	p
7440-22-4	Silver	0.22	U	—	p
7440-23-5	Sodium	290	B	—	p
7440-28-0	Thallium	0.47	B	—	p
7440-62-2	Vanadium	43.2	—	—	p
7440-66-6	Zinc	28.0	—	—	p

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM869

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM864

Matrix (soil/water): SOIL Lab Sample ID: 28060.12

Level (low/med): LOW Date Received: 12/21/96

Solids: 91.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7650			p
7440-36-0	Antimony	0.65	U	NT	p
7440-38-2	Arsenic	1.3	B		p
7440-39-3	Barium	33.9	B		p
7440-41-7	Beryllium	0.22	U		p
7440-43-9	Cadmium	0.22	U		p
7440-70-2	Calcium	3190			p
7440-47-3	Chromium	16.5			p
7440-48-4	Cobalt	6.4	B		p
7440-50-8	Copper	9.4			p
7439-39-6	Iron	12100			p
7439-92-1	Lead	1.4			p
7439-95-4	Magnesium	3560			p
7439-96-5	Manganese	202			p
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	28.6			p
7440-09-7	Potassium	392	B		p
7782-49-2	Selenium	0.87	U		p
7440-22-4	Silver	0.22	U		p
7440-23-5	Sodium	333	B		p
7440-28-0	Thallium	0.53	B		p
7440-62-2	Vanadium	27.0			p
7440-56-6	Zinc	22.4			p

DM
1/10/97

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM871

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.13

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____89.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18400	—	—	p
7440-36-0	Antimony	0.67	U	NUJ	p
7440-38-2	Arsenic	1.7	B	—	p
7440-39-3	Barium	69.7	—	—	p
7440-41-7	Beryllium	0.24	B	—	p
7440-43-9	Cadmium	0.22	U	—	p
7440-70-2	Calcium	2420	—	—	p
7440-47-3	Chromium	27.4	—	—	p
7440-48-4	Cobalt	8.4	B	—	p
7440-50-8	Copper	11.3	—	—	p
7439-89-6	Iron	16400	—	—	p
7439-92-1	Lead	2.1	—	—	p
7439-95-4	Magnesium	4630	—	—	p
7439-96-5	Manganese	221	—	—	p
7439-97-6	Mercury	0.11	U	—	CV
7440-02-0	Nickel	38.3	—	—	p
7440-09-7	Potassium	452	B	—	p
7782-49-2	Selenium	0.90	U	—	p
7440-22-4	Silver	0.22	U	—	p
7440-23-5	Sodium	276	B	—	p
7440-28-0	Thallium	0.55	B	—	p
7440-62-2	Vanadium	45.5	—	—	p
7440-66-6	Zinc	23.2	—	—	p
_____	_____	_____	—	—	—
_____	_____	_____	—	—	—

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM872

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM864

Matrix (soil/water): SOIL Lab Sample ID: 28060.14

Level (low/med): LOW Date Received: 12/21/96

% Solids: 90.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11000	—	—	P
7440-36-0	Antimony	0.66	U	—	P
7440-38-2	Arsenic	1.7	B	—	P
7440-39-3	Barium	49.0	—	—	P
7440-41-7	Beryllium	0.22	U	—	P
7440-43-9	Cadmium	0.22	U	—	P
7440-70-2	Calcium	2540	—	—	P
7440-47-3	Chromium	20.4	—	—	P
7440-48-4	Cobalt	6.9	B	—	P
7440-50-8	Copper	10.4	—	—	P
7439-89-6	Iron	12200	—	—	P
7439-92-1	Lead	1.9	—	—	P
7439-95-4	Magnesium	4310	—	—	P
7439-96-5	Manganese	214	—	—	P
7439-97-6	Mercury	0.11	U	—	P
7440-02-0	Nickel	47.9	—	—	P
7440-09-7	Potassium	329	B	—	P
7782-49-2	Selenium	0.88	U	—	P
7440-22-4	Silver	0.22	U	—	P
7440-23-5	Sodium	277	B	—	P
7440-28-0	Thallium	0.67	B	—	P
7440-62-2	Vanadium	29.6	—	—	P
7440-66-6	Zinc	21.7	—	—	P

DM

1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM873

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.15

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____85.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12900	—	—	P
7440-36-0	Antimony	0.70	U	—	P
7440-38-2	Arsenic	1.8	B	—	P
7440-39-3	Barium	56.4	—	—	P
7440-41-7	Beryllium	0.23	U	—	P
7440-43-9	Cadmium	0.23	U	—	P
7440-70-2	Calcium	2010	—	—	P
7440-47-3	Chromium	18.9	—	—	P
7440-48-4	Cobalt	6.5	B	—	P
7440-50-8	Copper	10	—	—	P
7439-89-6	Iron	12400	—	—	P
7439-92-1	Lead	5.9	—	—	P
7439-95-4	Magnesium	2990	—	—	P
7439-96-5	Manganese	239	—	—	P
7439-97-6	Mercury	0.12	U	—	CV
7440-02-0	Nickel	29.1	—	—	P
7440-09-7	Potassium	286	B	—	P
7782-49-2	Selenium	0.93	U	—	P
7440-22-4	Silver	0.23	U	—	P
7440-23-5	Sodium	215	B	—	P
7440-28-0	Thallium	0.53	B	—	P
7440-62-2	Vanadium	33.6	—	—	P
7440-66-6	Zinc	33.4	—	—	P

DM

1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM874

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM864

Matrix (soil/water): SOIL Lab Sample ID: 28060.16

Level (low/med): LOW Date Received: 12/21/96

Solids: 88.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13500	-		P
7440-36-0	Antimony	0.68	U	NAJ	P
7440-38-2	Arsenic	2.0	B		P
7440-39-3	Barium	54.1			P
7440-41-7	Beryllium	0.23	U		P
7440-43-9	Cadmium	0.23	U		P
7440-70-2	Calcium	2980			P
7440-47-3	Chromium	20.6			P
7440-48-4	Cobalt	7.3	B		P
7440-50-8	Copper	10.8			P
7439-89-6	Iron	13800			P
7439-92-1	Lead	2.9			P
7439-95-4	Magnesium	3530			P
7439-96-5	Manganese	242			P
7439-97-6	Mercury	0.11	U	X	CV
7440-02-0	Nickel	35.0			P
7440-09-7	Potassium	438	B		P
7782-49-2	Selenium	0.91	U	A	P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	318	B		P
7440-28-0	Thallium	0.63	B		P
7440-62-2	Vanadium	36.1			P
7440-66-6	Zinc	24.6		X	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM875

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.17

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____ 89.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13600	-		P
7440-36-0	Antimony	0.72	B	H J	P
7440-38-2	Arsenic	1.7	B		P
7440-39-3	Barium	54.8			P
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	1770			P
7440-47-3	Chromium	19.8			P
7440-48-4	Cobalt	6.4	B		P
7440-50-8	Copper	9.9			P
7439-89-6	Iron	13100			P
7439-92-1	Lead	5.1			P
7439-95-4	Magnesium	3660			P
7439-96-5	Manganese	174			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	33.4			P
7440-09-7	Potassium	235	B		P
7782-49-2	Selenium	0.99	B	H J	P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	247	B		P
7440-28-0	Thallium	0.45	U		P
7440-62-2	Vanadium	34.1			P
7440-66-6	Zinc	22.2			P

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM876

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.18

Level (low/med): _____ LOW_____ Date Received: 12/21/96 _____

Solids: _____ 91.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10800	—	—	p
7440-36-0	Antimony	0.66	U	X uJ	p
7440-38-2	Arsenic	1.4	B	—	p
7440-39-3	Barium	39.0	B	—	p
7440-41-7	Beryllium	0.22	U	—	p
7440-43-9	Cadmium	0.22	U	—	p
7440-70-2	Calcium	2300	—	—	p
7440-47-3	Chromium	21.8	—	—	p
7440-48-4	Cobalt	6.5	B	—	p
7440-50-8	Copper	11.2	—	—	p
7439-99-6	Iron	11800	—	—	p
7439-92-1	Lead	1.7	—	—	p
7439-95-4	Magnesium	3870	—	—	p
7439-96-5	Manganese	189	—	—	p
7439-97-6	Mercury	0.11	U	—	CV
7440-02-0	Nickel	35.3	—	—	p
7440-09-7	Potassium	385	B	—	p
7782-49-2	Selenium	0.87	U	X	p
7440-22-4	Silver	0.22	U	—	p
7440-23-5	Sodium	272	B	—	p
7440-28-0	Thallium	0.78	B	—	p
7440-62-2	Vanadium	29.3	—	—	p
7440-66-6	Zinc	22.4	—	X	p

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM877

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_ SAS No.: _____ SDG No.: MJM864

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.19

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____ 87.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20600			p
7440-36-0	Antimony	0.72	B	X J	p
7440-38-2	Arsenic	3.5			p
7440-39-3	Barium	96.1			p
7440-41-7	Beryllium	0.34	B		p
7440-43-9	Cadmium	0.27	B		p
7440-70-2	Calcium	2260			p
7440-47-3	Chromium	26.3			p
7440-48-4	Cobalt	7.8	B		p
7440-50-8	Copper	13.8			p
7439-89-6	Iron	16600			p
7439-92-1	Lead	30.2			p
7439-95-4	Magnesium	3700			p
7439-96-5	Manganese	350			p
7439-97-6	Mercury	0.11	U	X	CV
7440-02-0	Nickel	38.3			p
7440-09-7	Potassium	332	B		p
7782-49-2	Selenium	0.96	B	X J	p
7440-22-4	Silver	0.23	U		p
7440-23-5	Sodium	271	B		p
7440-28-0	Thallium	0.89	B		p
7440-62-2	Vanadium	39.9			p
7440-66-6	Zinc	48.8		X	p

DM

1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM878

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM864

Matrix (soil/water): SOIL Lab Sample ID: 28060.20

Level (low/med): LOW Date Received: 12/21/96

Solids: 89.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8210	-		P
7440-36-0	Antimony	0.67	U	H ug	P
7440-38-2	Arsenic	3.8			P
7440-39-3	Barium	29.9	B		P
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	2220			P
7440-47-3	Chromium	16.7			P
7440-48-4	Cobalt	5.7	B		P
7440-50-8	Copper	9.2			P
7439-89-6	Iron	11100			P
7439-92-1	Lead	1.5			P
7439-95-4	Magnesium	3720			P
7439-96-5	Manganese	296			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	29.0			P
7440-09-7	Potassium	325	B		P
7782-49-2	Selenium	0.89	U	H	P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	276	B		P
7440-28-0	Thallium	0.66	B		P
7440-62-2	Vanadium	29.1			P
7440-66-6	Zinc	18.5			P

DM
1/10/97

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue

Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: February 6, 1997

TO: Mike Martin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *MW*

SUBJ: Inorganic Data Quality Assurance Review, Former Nike Missile Site, Poulsbo, WA

REF: TDD: 96-11-0007 PAN: AK-07-01-SI-DM

The data quality assurance review of 14 soil samples collected from the Former Nike Missile site in Poulsbo, Washington, has been completed. Inorganic analyses were performed by Southwest Laboratory of Oklahoma, Broken Arrow, OK.

The following change was made to the original data validation report:

The "B" flags, indicating a concentration above the instrument detection limit but below the contract required detection limit, were deleted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

January 10, 1997

REPLY TO
ATTN OF: OEA-095

MEMORANDUM

SUBJECT: Data Validation for Nike Missile Launch Site, Case # 25253,
Sample Delivery Group (SDG) MJM879, Metals analysis

FROM: Donald Matheny, Chemist *DM*
Quality Assurance & Data Unit, OEA

TO: Mark Ader, Site Assessment Manager
Office of Environmental Cleanup

The data validation of metals analysis for the above sample delivery group (SDG) is complete. 14 soil samples were analyzed for metals by Southwest Laboratory of Oklahoma Inc., Broken Arrow, OK. Sample numbers for this SDG are as follows:

MJM879	MJM880	MJM881	MJM882	MJM883
MJM884	MJM885	MJM886	MJM888	MJM889
MJM890	MJM891	MJM892	MJM893	

DATA QUALIFICATIONS

The following comments refer to the laboratory's performance in meeting quality control specifications outlined in the "CLP Statement of Work (CLP-SOW) for Inorganic Analysis, ILM04.0", and the "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA-540/R-94-013". Data qualifications presented herein are based on the information provided for the review.

1.0 TIMELINESS - Acceptable

The holding time from the date of collection to the date of digestion and analyses were met for all metals (180 days, mercury 28 days). Sample collection and analysis dates are provided below. Cooler temperature was 6°C upon receipt at the laboratory.

Sample Number	Sample Date	Dates of Analyses	
		ICP	Mercury
MJMS79	12/17/96	12/28/96	12/30/96
MJMS80	12/17/96	12/28/96	12/30/96
MJMS81	12/18/96	12/28/96	12/30/96
MJMS82	12/18/96	12/28/96	12/30/96
MJMS83	12/18/96	12/28/96	12/30/96
MJMS84	12/18/96	12/28/96	12/30/96
MJMS85	12/18/96	12/28/96	12/30/96
MJMS86	12/18/96	12/28/96	12/30/96
MJMS88	12/18/96	12/28/96	12/30/96
MJMS89	12/18/96	12/28/96	12/30/96
MJMS90	12/18/96	12/28/96	12/30/96
MJMS91	12/18/96	12/28/96	12/30/96
MJMS92	12/18/96	12/28/96	12/30/96
MJMS93	12/18/96	12/28/96	12/30/96

2.0 INSTRUMENT CALIBRATION/VERIFICATION - Acceptable

For ICP-AES analysis, instrument calibration was performed with a blank and single calibration standard for each element. Recoveries for calibration verification standards were 95-107% which met the frequency (10%) and recovery (90-110%) requirements. CRDL standards were analyzed at the required frequency (5%) and concentrations.

For mercury analysis, the instrument was calibrated with a blank and five standards with a resulting correlation coefficient 0.999 (criterion: ≥ 0.995). Recoveries for verification standards (93-101%) met the frequency (10%) and recovery (80-120%) criteria. A CRDL standard was analyzed at the required 0.2 ppb concentration.

3.0 ICP-AES INTERFERENCE CHECK SAMPLE (ICS) - Acceptable

Percent recoveries for the ICS (91-112%) met the 80-120% recovery criterion and the 5% frequency requirements for analysis. No interferences are suspected based upon ICS performance and indigenous element concentrations.

4.0 LABORATORY CONTROL SAMPLES (LCS) - Acceptable

All metals results for the LCS were within the established control limits for soils.

5.0 BLANKS - Acceptable

Results for all blanks were non-detected or below a factor of 5 times that found in associated samples.

6.0 MATRIX SPIKE ANALYSIS

Percent recoveries for matrix spike samples (85-107%) met the recovery criterion (75-125%) except for antimony (67%), lead (67%) and mercury (145%). Because mercury was not detected in all samples, mercury results were not qualified. Lead and antimony results were qualified as "J" or "UJ". Reported values for lead and antimony may be biased low. The indigenous manganese concentration in the spiked sample (MJM879) was approximately 4 times the concentration of the spike level added. As a result, the manganese spike recovery was not be evaluated.

7.0 DUPLICATE SAMPLE ANALYSIS - Acceptable

Sample duplicate relative percent differences (RPD) were in the range of 0-15%. The required criteria are $\pm 35\%$ (or $\pm 2X$ CRDL).

8.0 ICP-AES SERIAL DILUTION - Acceptable

Results for the five-fold serial dilution were within 2% difference which met the $\pm 10\%$ difference criterion.

9.0 ASSESSMENT SUMMARY

The following is a summary of the qualified data: The (J) or (UJ) qualifier was applied to all antimony and lead results due to a low recovery for the matrix spike sample. As a result, reported antimony and lead values may be biased low.

DATA QUALIFIERS

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM879

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.21

Level (low/med): LOW Date Received: 12/21/96

Solids: 87.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17100	-		P
7440-36-0	Antimony	0.68	U	UJ	P
7440-38-2	Arsenic	2.7	-		P
7440-39-3	Barium	85.5	-		P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	0.23	U		P
7440-70-2	Calcium	2020	-		P
7440-47-3	Chromium	25.6	-		P
7440-48-4	Cobalt	7.8	B		P
7440-50-8	Copper	11.4	-		P
7439-89-6	Iron	16800	-		P
7439-92-1	Lead	10.3	-	UJ	P
7439-95-4	Magnesium	4010	-		P
7439-96-5	Manganese	400	-	U	P
7439-97-6	Mercury	0.11	U	U	CV
7440-02-0	Nickel	35.7	-		P
7440-09-7	Potassium	321	B		P
7782-49-2	Selenium	0.91	U		P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	287	B		P
7440-28-0	Thallium	1.4	B		P
7440-62-2	Vanadium	42.1	-		P
7440-66-6	Zinc	33.3	-		P
	Cyanide		-		NR

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM880

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM879

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.22

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____89.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13700	—	—	P
7440-36-0	Antimony	0.67	U	—	P
7440-38-2	Arsenic	1.9	B	—	P
7440-39-3	Barium	62.6	—	—	P
7440-41-7	Beryllium	0.22	U	—	P
7440-43-9	Cadmium	0.22	U	—	P
7440-70-2	Calcium	1840	—	—	P
7440-47-3	Chromium	19.4	—	—	P
7440-48-4	Cobalt	7.0	B	—	P
7440-50-8	Copper	11.5	—	—	P
7439-89-6	Iron	12000	—	—	P
7439-92-1	Lead	2.4	—	—	P
7439-95-4	Magnesium	3910	—	—	P
7439-96-5	Manganese	193	—	—	P
7439-97-6	Mercury	0.11	U	—	CV
7440-02-0	Nickel	40.0	—	—	P
7440-09-7	Potassium	352	B	—	P
7782-49-2	Selenium	0.90	U	—	P
7440-22-4	Silver	0.22	U	—	P
7440-23-5	Sodium	278	B	—	P
7440-28-0	Thallium	0.89	B	—	P
7440-62-2	Vanadium	27.6	—	—	P
7440-66-6	Zinc	20.4	—	—	P
	Cyanide		—	—	NR

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: _____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM881

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.23

Level (low/med): LOW Date Received: 12/21/96

% Solids: 88.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15600	—	—	P
7440-36-0	Antimony	0.68	U	# UJ	P
7440-38-2	Arsenic	3.7	—	—	P
7440-39-3	Barium	69.6	—	—	P
7440-41-7	Beryllium	0.27	B	—	P
7440-43-9	Cadmium	0.23	U	—	P
7440-70-2	Calcium	2730	—	—	P
7440-47-3	Chromium	47.5	—	—	P
7440-48-4	Cobalt	7.8	B	—	P
7440-50-8	Copper	13.3	—	—	P
7439-89-6	Iron	15800	—	—	P
7439-92-1	Lead	6.3	—	# J	P
7439-95-4	Magnesium	4670	—	—	P
7439-96-5	Manganese	236	—	#	P
7439-97-6	Mercury	0.11	U	#	CV
7440-02-0	Nickel	44.2	—	—	P
7440-09-7	Potassium	403	B	—	P
7782-49-2	Selenium	0.91	U	—	P
7440-22-4	Silver	0.23	U	—	P
7440-23-5	Sodium	343	B	—	P
7440-28-0	Thallium	0.60	B	—	P
7440-62-2	Vanadium	40.0	—	—	P
7440-66-6	Zinc	36.4	—	—	P
	Cyanide		—	—	NR

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM882

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.24

Level (low/med): LOW Date Received: 12/21/96

Solids: 78.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21900	—	—	P
7440-36-0	Antimony	0.77	U	—	P
7440-38-2	Arsenic	3.5	—	—	P
7440-39-3	Barium	61.7	—	—	P
7440-41-7	Beryllium	0.34	B	—	P
7440-43-9	Cadmium	0.26	U	—	P
7440-70-2	Calcium	2990	—	—	P
7440-47-3	Chromium	32.9	—	—	P
7440-48-4	Cobalt	8.7	B	—	P
7440-50-8	Copper	13.6	—	—	P
7439-89-6	Iron	15500	—	—	P
7439-92-1	Lead	4.4	—	—	P
7439-95-4	Magnesium	4430	—	—	P
7439-96-5	Manganese	184	—	—	P
7439-97-6	Mercury	0.13	U	—	CV
7440-02-0	Nickel	44.8	—	—	P
7440-09-7	Potassium	397	B	—	P
7782-49-2	Selenium	1.0	U	—	P
7440-22-4	Silver	0.26	U	—	P
7440-23-5	Sodium	335	B	—	P
7440-28-0	Thallium	0.51	U	—	P
7440-62-2	Vanadium	48.6	—	—	P
7440-66-6	Zinc	28.0	—	—	P
	Cyanide		—	—	NR

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM883

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM879.

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.25

Level (low/med): LOW_____ Date Received: 12/21/96

% Solids: _____ 87.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18000	—	—	p
7440-36-0	Antimony	0.69	U	—	p
7440-38-2	Arsenic	2.9	—	—	p
7440-39-3	Barium	56.1	—	—	p
7440-41-7	Beryllium	0.31	B	—	p
7440-43-9	Cadmium	0.23	U	—	p
7440-70-2	Calcium	2940	—	—	p
7440-47-3	Chromium	25.1	—	—	p
7440-48-4	Cobalt	8.1	B	—	p
7440-50-8	Copper	12.2	—	—	p
7439-89-6	Iron	17300	—	—	p
7439-92-1	Lead	6.9	—	—	p
7439-95-4	Magnesium	4840	—	—	p
7439-96-5	Manganese	245	—	—	p
7439-97-6	Mercury	0.11	U	—	CV
7440-02-0	Nickel	46.8	—	—	p
7440-09-7	Potassium	379	B	—	p
7782-49-2	Selenium	0.92	U	—	p
7440-22-4	Silver	0.23	U	—	p
7440-23-5	Sodium	320	B	—	p
7440-28-0	Thallium	0.64	B	—	p
7440-62-2	Vanadium	45.1	—	—	p
7440-66-6	Zinc	33.8	—	—	p
	Cyanide		—	—	NR

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: _____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM884

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.26

Level (low/med): LOW Date Received: 12/21/96

% Solids: 90.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15500			P
7440-36-0	Antimony	0.66	U	HUJ	P
7440-38-2	Arsenic	2.4			P
7440-39-3	Barium	50.2			P
7440-41-7	Beryllium	0.23	B		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	2350			P
7440-47-3	Chromium	23.3			P
7440-48-4	Cobalt	10.5	B		P
7440-50-8	Copper	20.4			P
7439-89-6	Iron	17600			P
7439-92-1	Lead	1.9		HJ	P
7439-95-4	Magnesium	5900			P
7439-96-5	Manganese	235		H	P
7439-97-6	Mercury	0.11	U	H	CV
7440-02-0	Nickel	107			P
7440-09-7	Potassium	360	B		P
7782-49-2	Selenium	0.89	U		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	297	B		P
7440-28-0	Thallium	0.64	B		P
7440-62-2	Vanadium	43.0			P
7440-66-6	Zinc	24.6			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM885

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.27

Level (low/med): LOW Date Received: 12/21/96

Solids: 88.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16400	-		P
7440-36-0	Antimony	0.68	U	NUJ	P
7440-38-2	Arsenic	2.3	-		P
7440-39-3	Barium	54.5	-		P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	0.23	U		P
7440-70-2	Calcium	5420	-		P
7440-47-3	Chromium	29.0	-		P
7440-48-4	Cobalt	7.9	B		P
7440-50-8	Copper	9.9	-		P
7439-89-6	Iron	15100	-		P
7439-92-1	Lead	4.3	-	NUJ	P
7439-95-4	Magnesium	4130	-		P
7439-96-5	Manganese	283	-	NUJ	P
7439-97-6	Mercury	0.11	U	NUJ	CV
7440-02-0	Nickel	37.1	-		P
7440-09-7	Potassium	440	B		P
7782-49-2	Selenium	0.90	U		P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	342	B		P
7440-28-0	Thallium	0.72	B		P
7440-62-2	Vanadium	44.9	-		P
7440-66-6	Zinc	25.2	-		P
	Cyanide		-		NR

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM886

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM879

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.28

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____88.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14900	—	—	P
7440-36-0	Antimony	0.67	U	NHJ	P
7440-38-2	Arsenic	2.0	B	—	P
7440-39-3	Barium	58.4	—	—	P
7440-41-7	Beryllium	0.26	B	—	P
7440-43-9	Cadmium	0.22	U	—	P
7440-70-2	Calcium	3550	—	—	P
7440-47-3	Chromium	23.2	—	—	P
7440-48-4	Cobalt	8.3	B	—	P
7440-50-8	Copper	10.5	—	—	P
7439-89-6	Iron	13900	—	—	P
7439-92-1	Lead	1.7	—	NJ	P
7439-95-4	Magnesium	3750	—	—	P
7439-96-5	Manganese	277	—	N	P
7439-97-6	Mercury	0.11	U	N	CV
7440-02-0	Nickel	37.2	—	—	P
7440-09-7	Potassium	447	B	—	P
7782-49-2	Selenium	0.90	U	—	P
7440-22-4	Silver	0.22	U	—	P
7440-23-5	Sodium	338	B	—	P
7440-28-0	Thallium	0.84	B	—	P
7440-62-2	Vanadium	37.6	—	—	P
7440-66-6	Zinc	20.6	—	—	P
	Cyanide		—	—	NR

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: _____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM888

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.30

Level (low/med): LOW Date Received: 12/21/96

% Solids: 85.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15300	-		P
7440-36-0	Antimony	0.71	U	H U J	P
7440-38-2	Arsenic	2.9	-		P
7440-39-3	Barium	68.3	-		P
7440-41-7	Beryllium	0.25	B		P
7440-43-9	Cadmium	0.57	B		P
7440-70-2	Calcium	3190	-		P
7440-47-3	Chromium	24.6	-		P
7440-48-4	Cobalt	7.9	B		P
7440-50-8	Copper	13.4	-		P
7439-89-6	Iron	15200	-		P
7439-92-1	Lead	17.4	-	H J	P
7439-95-4	Magnesium	4340	-		P
7439-96-5	Manganese	227	-	H	P
7439-97-6	Mercury	0.12	U	H	CV
7440-02-0	Nickel	36.6	-		P
7440-09-7	Potassium	446	B		P
7782-49-2	Selenium	0.94	U		P
7440-22-4	Silver	0.24	U		P
7440-23-5	Sodium	353	B		P
7440-28-0	Thallium	0.80	B		P
7440-62-2	Vanadium	40.4	-		P
7440-66-6	Zinc	51.7	-		P
	Cyanide		-		NR

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM889

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM879

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.31

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____84.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14700	-		P
7440-36-0	Antimony	0.71	U	#UJ	P
7440-38-2	Arsenic	2.0	B		P
7440-39-3	Barium	33.7	B		P
7440-41-7	Beryllium	0.24	U		P
7440-43-9	Cadmium	0.24	U		P
7440-70-2	Calcium	2370	-		P
7440-47-3	Chromium	24.9	-		P
7440-48-4	Cobalt	8.5	B		P
7440-50-8	Copper	13.0	-		P
7439-89-6	Iron	15600	-		P
7439-92-1	Lead	2.1	-	#J	P
7439-95-4	Magnesium	5220	-		P
7439-96-5	Manganese	211	-	#	P
7439-97-6	Mercury	0.12	U	#	CV
7440-02-0	Nickel	47.5	-		P
7440-09-7	Potassium	342	B		P
7782-49-2	Selenium	0.95	U		P
7440-22-4	Silver	0.24	U		P
7440-23-5	Sodium	271	B		P
7440-28-0	Thallium	0.47	U		P
7440-62-2	Vanadium	38.1	-		P
7440-66-6	Zinc	24.8	-		P
	Cyanide		-		NR

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET013
EPA SAMPLE NO.

MJM890

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.32

Level (low/med): LOW Date Received: 12/21/96

% Solids: 90.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12100	-		P
7440-36-0	Antimony	0.66	U	HUJ	P
7440-38-2	Arsenic	2.3	-		P
7440-39-3	Barium	44.9	-		P
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	2810	-		P
7440-47-3	Chromium	24.7	-		P
7440-48-4	Cobalt	7.2	B		P
7440-50-8	Copper	11.2	-		P
7439-89-6	Iron	13900	-		P
7439-92-1	Lead	7.3	-	HJ	P
7439-95-4	Magnesium	4310	-		P
7439-96-5	Manganese	266	-	H	P
7439-97-6	Mercury	0.11	U	H	CV
7440-02-0	Nickel	34.9	-		P
7440-09-7	Potassium	395	B		P
7782-49-2	Selenium	0.88	U		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	303	B		P
7440-28-0	Thallium	0.75	B		P
7440-62-2	Vanadium	34.6	-		P
7440-66-6	Zinc	27.0	-		P
	Cyanide				NR

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM891

Lab Name: SOUTHWEST LABORATORY_____ Contract: 68-D5-0137

Lab Code: SWOK_____ Case No.: 25253_____ SAS No.: _____ SDG No.: MJM879

Matrix (soil/water): SOIL_____ Lab Sample ID: 28060.33

Level (low/med): LOW_____ Date Received: 12/21/96

Solids: _____82.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16400	—	—	P
7440-36-0	Antimony	0.73	U	#UJ	P
7440-38-2	Arsenic	2.4	B	—	P
7440-39-3	Barium	58.0	—	—	P
7440-41-7	Beryllium	0.28	B	—	P
7440-43-9	Cadmium	0.24	U	—	P
7440-70-2	Calcium	2880	—	—	P
7440-47-3	Chromium	25.8	—	—	P
7440-48-4	Cobalt	7.5	B	—	P
7440-50-8	Copper	10.3	—	—	P
7439-89-6	Iron	14800	—	—	P
7439-92-1	Lead	2.5	—	#J	P
7439-95-4	Magnesium	4080	—	—	P
7439-96-5	Manganese	223	—	#	P
7439-97-6	Mercury	0.12	U	#	CV
7440-02-0	Nickel	41.8	—	—	P
7440-09-7	Potassium	364	B	—	P
7782-49-2	Selenium	0.97	U	—	P
7440-22-4	Silver	0.24	U	—	P
7440-23-5	Sodium	316	B	—	P
7440-28-0	Thallium	0.49	U	—	P
7440-62-2	Vanadium	41.4	—	—	P
7440-66-6	Zinc	21.1	—	—	P
	Cyanide		—	—	NR

DM
1/10/97

Color Before: BROWN_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW_____ Clarity After: _____ Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM892

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.34

Level (low/med): LOW Date Received: 12/21/96

Solids: 91.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10100	—	—	P
7440-36-0	Antimony	0.66	U	#45	P
7440-38-2	Arsenic	1.8	B	—	P
7440-39-3	Barium	30.4	B	—	P
7440-41-7	Beryllium	0.22	U	—	P
7440-43-9	Cadmium	0.22	U	—	P
7440-70-2	Calcium	2570	—	—	P
7440-47-3	Chromium	20.4	—	—	P
7440-48-4	Cobalt	6.1	B	—	P
7440-50-8	Copper	10.4	—	—	P
7439-89-6	Iron	12900	—	—	P
7439-92-1	Lead	1.6	—	#J	P
7439-95-4	Magnesium	4320	—	—	P
7439-96-5	Manganese	176	—	#	P
7439-97-6	Mercury	0.11	U	#	CV
7440-02-0	Nickel	36.1	—	—	P
7440-09-7	Potassium	336	B	—	P
7782-49-2	Selenium	0.87	U	—	P
7440-22-4	Silver	0.22	U	—	P
7440-23-5	Sodium	274	B	—	P
7440-28-0	Thallium	0.67	B	—	P
7440-62-2	Vanadium	32.5	—	—	P
7440-66-6	Zinc	19.5	—	—	P
	Cyanide	—	—	—	NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM893

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM879

Matrix (soil/water): SOIL Lab Sample ID: 28060.35

Level (low/med): LOW Date Received: 12/21/96

Solids: 89.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12600	—	—	P
7440-36-0	Antimony	0.67	U	#uJ	P
7440-38-2	Arsenic	2.1	B	—	P
7440-39-3	Barium	44.3	B	—	P
7440-41-7	Beryllium	0.22	U	—	P
7440-43-9	Cadmium	0.22	U	—	P
7440-70-2	Calcium	2500	—	—	P
7440-47-3	Chromium	25.8	—	—	P
7440-48-4	Cobalt	7.9	B	—	P
7440-50-8	Copper	12.1	—	—	P
7439-89-6	Iron	14400	—	—	P
7439-92-1	Lead	1.9	—	#J	P
7439-95-4	Magnesium	4890	—	—	P
7439-96-5	Manganese	188	—	#	P
7439-97-6	Mercury	0.11	U	#	CV
7440-02-0	Nickel	41.2	—	—	P
7440-09-7	Potassium	390	B	—	P
7782-49-2	Selenium	0.90	U	—	P
7440-22-4	Silver	0.22	U	—	P
7440-23-5	Sodium	314	B	—	P
7440-28-0	Thallium	0.57	B	—	P
7440-62-2	Vanadium	36.2	—	—	P
7440-66-6	Zinc	21.8	—	—	P
—	Cyanide	—	—	—	NR

DM
1/10/97

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue

Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: February 6, 1997

TO: Mike Martin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *MW*

SUBJ: Full Organic Data Quality Assurance Review, Former Nike Missile Site,
Poulsbo, WA

REF: TDD: 96-11-0007

PAN: AK-07-01-SI-DM

The data quality assurance review of 14 soil samples collected from the Former Nike Missile site in Poulsbo, Washington, has been completed. Full Organic analyses were performed by Compuchem Environmental Corporation, Research Triangle Park, NC.

The following change was made to the original data validation report:

The "P" flags, indicating a greater than 25 % difference between individual pesticide results on the two gas chromatograph columns, were deleted from results for sample JM203. All other "P" flags had been previously deleted by the original reviewer. In all cases, the lower of the two concentrations were reported.



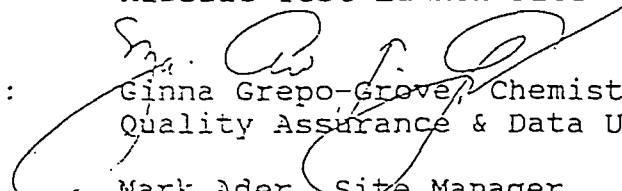
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

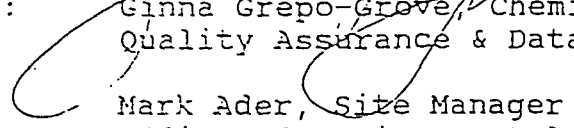
Reply To
Attn Of: OEA-095

January 27, 1997

MEMORANDUM

Subject: Data Validation Report for Full Organic Analysis
(Volatile Organics, Semi-Volatile Organics, Pesticides,
and Polychlorinated Biphenyls) of Samples from the Nike
Missile Test Launch Site Case: 25253 SDG: JM199

From:  Ginna Grepo-Grove, Chemist
Quality Assurance & Data Unit, OEA

To:  Mark Ader, Site Manager
Office of Environmental Cleanup

The quality assurance (QA) review of 14 soil samples collected from the above referenced site has been completed. These sample were analyzed for volatile organics (VOAs), semi-volatile organics (BNAs), pesticides and polychlorinated biphenyls (Pest/PCBs) in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.1) by Compuchem Environmental Corp., Research Triangle Park, NC. The following samples were reviewed in this report:

JM169	JM179	JM199
JM200	JM201	JM202
JM203	JM204	JM205
JM206	JM207	JM208
JM209	JM210	

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.1), and the USEPA CLP National Functional Guidelines for Organic Data Review (2/94).

The conclusions presented herein are based on the information provided for the review.

Holding Time - Acceptable

The soil samples were preserved with ice prior to shipment. All of the samples met the method and technical (40 CFR 136 water criteria) required holding times for all analyses. The Holding Times Summary listing the pertinent collection, extraction and analysis dates is attached at the end of this validation report.

Instrument Performance - Acceptable

A total of one GC and two GC/MS systems were used in all of the analyses (1 GC/MS for VOA, 1 GC/MS for BNAs and 1 GC/ECDs for pest/PCBs). All of the systems met the SOW specified technical acceptance criteria prior to sample analyses i.e, tuning and GC/MS performance checks, resolution checks, retention time, response factors and calibrations. The systems remained stable throughout the course of analyses. Instrument blanks were all clean and there were no indications of carry-over.

Initial Calibrations

Four initial calibrations performed for VOAs, ABNs and pest/PCB analyses were evaluated. All of the initial calibrations performed met the SOW technical acceptance criteria with the exception of the following:

Date of Analysis	Fraction	Compound	%RSD	Associated Samples	Qualifier Detects/Non-Detects
12/19/96	VOA	chloromethane	37.0	All samples	J/None
		vinyl chloride	32.6	All samples	J/None
		acetone	60.7	All Samples	J/UJ
12/28/96	BNA	2,4-dinitrophenol	33.7	All samples	UJ/None
		4-nitroaniline	42.3	All samples	UJ/None
		3,3'-dichlorobenzidine	44.4	All samples	UJ/None

Both chloromethane and vinyl chloride initial calibration curves were linear up to 50 ppb. Since none of the chloromethane and vinyl chloride were detected at concentrations over 50 ppb, none of the data were qualified. The two low standards for acetone were not linear. Therefore, both the acetone non-detects and detects at concentrations ≤ 20 ppb were qualified as estimates, "J/UJ". The lowest standards for 2,4-dinitrophenol, 4-nitroaniline and 3,3'-dichlorobenzidine were not linear. Therefore, the quantitation limits for these three BNA compounds were qualified as estimated, "UJ".

Continuing Calibrations

All of the continuing calibration verification standards (CCVs) met the criteria for frequency of analysis, the minimum response factor, the retention time, the chromatographic resolution, the relative percent difference (RPD) and the percent difference (%D) criteria with the following exceptions (The compounds listed below exceeded the %D criteria):

Date of Analysis	Fraction	Compound	Associated Samples	Qualifier Detect/Non-Detect
12/23/96	VOA	dibromochloromethane, bromoform	JM199, JM200, JM204, JM205, JM206, JM207, JM208, JM209	J/None
12/30/96	SNA	2,4-dinitrophenol 4-nitroaniline 3,3'-dichlorobenzidine	JM205, JM200	J/UJ J/None J/None

Compound Quantitation and Detection Limits

All of the samples were analyzed at the contract required quantitation limits (CRQLs). All of the reported results were within the calibration linear range and were adjusted for sample amount and percent moisture. Target compounds that were detected at concentrations less than the quantitation limits were qualified as estimated, "J". The detected pesticide and PCBs were quantitated from both columns. The lower pesticide/PCB value were reported. Pesticide/PCB concentrations with %Ds >25% were qualified as estimated, "J".

Blanks

The frequency of analysis of laboratory blanks was met. Background levels for all target compounds in the method blanks were below the CRQLs. Acetone is detected in the method blank VBLKP2 at 5 ug/Kg. Acetone and methylene chloride were also detected in the method and holding blank VBLKP5 and VHBLKP7, respectively. The acetone and methylene chloride detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U". Methoxychlor, 4,4'-DDT and endosulfan sulfate were detected in the pest/PCB method blanks. The detected methoxychlor, 4,4'-DDT and endosulfan sulfate in the samples at concentrations less than five time the concentrations in their associated blank were qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples and QC samples were analyzed in accordance with the SOW-specified analytical sequence for all three types of organic analyses.

System Monitoring Compounds (SMC)/Surrogates - Acceptable

All of the VOA, ABN and pest/PCB surrogate recoveries met the applicable QC criteria. The VOA SMC recoveries ranged from 80 - 110%; the BNA surrogates ranged from 50 - 121% and the pest/PCB surrogates ranged from 36 - 111%.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample JM209 was analyzed for VOA, BNAs, pest/PCB MS/MSD. The frequency of analysis of MS/MSD was met for all analyses. All of the applicable QC criteria for MS and MSD analyses were met with the exception of the following:

BNA MS/MSD recoveries:

Compound	MS Recovery (%)	MSD Recovery (%)	QC Limits (%)
2,4-dinitrotoluene	103	95	28-89
Pentachlorophenol	139	129	17-109

None of the associated data were qualified on this basis.

Internal Standards - Acceptable

The acceptance criteria for internal standards (IS) are ± 0.5 minutes for retention time shifts and -50% to +100% of the IS area as compared to the IS retention time and area of the continuing calibration standard. All of the GC/MS analyses met the IS area and retention time shift criteria. None of the data were qualified on this basis.

Compound Identification - Acceptable

All of the compounds detected in the GC/MS analyses were within the retention time windows and met the USEPA spectral matching criteria. All of the pest/PCB detected in the samples were within the retention time windows and were detected in both columns. None of the data were qualified on the basis of

compound identification.

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and the associated method blank(s) were qualified as unusable, "R". Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "JN", tentatively identified at an estimated concentration.

Laboratory Contact

The laboratory was not contacted for this review.

Overall Assessment

All of the samples were analyzed in accordance with the SOW specifications. Data results, as qualified, are acceptable and can be used for all purposes.

Holding Time Summary - Case 25253 SDG: JM199

Sample Number	Collection Date	VTSR*	Analysis Date VOA	Extraction Date	Analysis Date BNA	Analysis Date Pest/PCB
JM169	12/17/96	12/21/96	12/26/96	12/23/96	12/29/96	01/02/97
JM179	12/18/96	12/21/96	12/26/96	12/23/96	12/29/96	12/31/96
JM199	12/17/96	12/21/96	12/23/96	12/23/96	12/29/96	12/31/96
JM200	12/17/96	12/21/96	12/23/96	12/23/96	12/29/96	12/31/96
JM201	12/17/96	12/21/96	NA	12/23/96	NA	12/31/96
JM202	12/17/96	12/21/96	NA	12/23/96	NA	12/31/96
JM203	12/17/96	12/21/96	NA	12/23/96	NA	01/02/97
JM204	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	12/31/96
JM205	12/18/96	12/21/96	12/24/96	12/23/96	12/29/96	12/31/96
JM206	12/18/96	12/21/96	12/24/96	12/23/96	12/29/96	12/31/96
JM207	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	12/31/96
JM208	12/18/96	12/21/96	12/24/96	12/23/96	12/29/96	12/31/96
JM209	12/18/96	12/21/96	12/24/96	12/23/96	12/29/96	12/31/96
JM210	12/18/96	12/21/96	12/26/96	12/23/96	12/29/96	12/31/96

*VTSR - Verified Time of Sample Receipt in the Laboratory

** NA - Not Analyzed

DATA QUALIFIERS

- U - The analyte was not detected at or above the reported result.
- J - The analyte was positively identified. The associated numerical result is an estimate.
- R - The data are unusable for all purposes.
- N - There is evidence the analyte is present in this sample.
- JN - There is evidence that the analyte is present. The associated numerical result is an estimate.
- UJ - The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM169

Lab Name: COMPU-EM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835370

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035370B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 14

Date Analyzed: 12/26/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	12	U
74-83-9-----	Bromomethane	12	U
75-01-4-----	Vinyl Chloride	12	U
75-00-3-----	Chloroethane	12	U
75-09-2-----	Methylene Chloride	12	U
67-64-1-----	Acetone	12	U
75-15-0-----	Carbon Disulfide	12	U
75-35-4-----	1,1-Dichloroethene	12	U
75-34-3-----	1,1-Dichloroethane	12	U
540-59-0-----	1,2-Dichloroethene (total)	12	U
67-66-3-----	Chloroform	12	U
107-06-2-----	1,2-Dichloroethane	12	U
78-93-3-----	2-Butanone	12	U
71-55-6-----	1,1,1-Trichloroethane	12	U
56-23-5-----	Carbon Tetrachloride	12	U
75-27-4-----	Bromodichloromethane	12	U
78-87-5-----	1,2-Dichloropropane	12	U
10061-01-5-----	cis-1,3-Dichloropropene	12	U
79-01-6-----	Trichloroethene	12	U
124-48-1-----	Dibromochloromethane	12	U
79-00-5-----	1,1,2-Trichloroethane	12	U
71-43-2-----	Benzene	12	U
10061-02-6-----	trans-1,3-Dichloropropene	12	U
75-25-2-----	Bromoform	12	U
108-10-1-----	4-Methyl-2-Pentanone	12	U
591-73-6-----	2-Hexanone	12	U
127-18-4-----	Tetrachloroethene	12	U
79-34-5-----	1,1,2,2-Tetrachloroethane	12	U
108-88-3-----	Toluene	12	U
108-90-7-----	Chlorobenzene	12	U
100-41-4-----	Ethylbenzene	12	U
100-42-5-----	Styrene	12	U
1330-20-7-----	Xylene (Total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM169

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835370

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035370B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 14

Date Analyzed: 12/26/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.02	10 JB	L
2.	LABORATORY ARTIFACT	16.51	40 J	R
3.	LABORATORY ARTIFACT	19.19	85 J	R
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
48

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM179

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835371

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035371B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 8

Date Analyzed: 12/26/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM179

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835371

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035371B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 8

Date Analyzed: 12/26/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	9.86	13	US R
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

OLM03.0
ecology and environment
ecology and environment
61

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM199

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835285

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035285B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 14

Date Analyzed: 12/23/96

GC Column: DB524

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
55-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM199

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835285

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035285B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 14

Date Analyzed: 12/23/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SO2 (NOT IN TIC TOTAL)	0.84	41	JB
2.	LABORATORY ARTIFACT	16.55	22	J
3.	LABORATORY ARTIFACT	19.23	12	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM200

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPÜ

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835294

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035294B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 12

Date Analyzed: 12/23/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	-----Chloromethane	11	U
74-83-9	-----Bromomethane	11	U
75-01-4	-----Vinyl Chloride	11	U
75-00-3	-----Chloroethane	11	U
75-09-2	-----Methylene Chloride	11	U
67-64-1	-----Acetone	11	U
75-15-0	-----Carbon Disulfide	11	U
75-35-4	-----1,1-Dichloroethene	11	U
75-34-3	-----1,1-Dichloroethane	11	U
540-59-0	-----1,2-Dichloroethene (total)	11	U
67-66-3	-----Chloroform	11	U
107-06-2	-----1,2-Dichloroethane	11	U
78-93-3	-----2-Butanone	11	U
71-55-6	-----1,1,1-Trichloroethane	11	U
56-23-5	-----Carbon Tetrachloride	11	U
75-27-4	-----Bromodichloromethane	11	U
78-87-5	-----1,2-Dichloropropane	11	U
10061-01-5	-----cis-1,3-Dichloropropene	11	U
79-01-6	-----Trichloroethene	11	U
124-48-1	-----Dibromochloromethane	11	U
79-00-5	-----1,1,2-Trichloroethane	11	U
71-43-2	-----Benzene	11	U
10061-02-6	-----trans-1,3-Dichloropropene	11	U
75-25-2	-----Bromoform	11	U
108-10-1	-----4-Methyl-2-Pentanone	11	U
591-78-6	-----2-Hexanone	11	U
127-18-4	-----Tetrachloroethene	11	U
79-34-5	-----1,1,2,2-Tetrachloroethane	11	U
108-88-3	-----Toluene	11	U
108-90-7	-----Chlorobenzene	11	U
100-41-4	-----Ethylbenzene	11	U
100-42-5	-----Styrene	11	U
1330-20-7	-----Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM200

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835294

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035294B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 12

Date Analyzed: 12/23/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	34	JB
2.	LABORATORY ARTIFACT	16.51	34	J
3.	LABORATORY ARTIFACT	19.20	42	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment
ecology and environment
OLM03.0
33

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM204

Lab Name: COMPU-CHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835298

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035298B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 14

Date Analyzed: 12/23/96

GC Column: DB524

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	12	U
74-83-9-----	Bromomethane	12	U
75-01-4-----	Vinyl Chloride	12	U
75-00-3-----	Chloroethane	12	U
75-09-2-----	Methylene Chloride	12	U
67-64-1-----	Acetone	12	U
75-15-0-----	Carbon Disulfide	12	U
75-35-4-----	1,1-Dichloroethene	12	U
75-34-3-----	1,1-Dichloroethane	12	U
540-59-0-----	1,2-Dichloroethene (total)	12	U
67-66-3-----	Chloroform	12	U
107-06-2-----	1,2-Dichloroethane	12	U
78-93-3-----	2-Butanone	12	U
71-55-6-----	1,1,1-Trichloroethane	12	U
56-23-5-----	Carbon Tetrachloride	12	U
75-27-4-----	Bromodichloromethane	12	U
78-87-5-----	1,2-Dichloropropane	12	U
10061-01-5-----	cis-1,3-Dichloropropene	12	U
79-01-6-----	Trichloroethene	12	U
124-48-1-----	Dibromochloromethane	12	U
79-00-5-----	1,1,2-Trichloroethane	12	U
71-43-2-----	Benzene	12	U
10061-02-6-----	trans-1,3-Dichloropropene	12	U
75-25-2-----	Bromoform	12	U
108-10-1-----	4-Methyl-2-Pentanone	12	U
591-78-6-----	2-Hexanone	12	U
127-18-4-----	Tetrachloroethene	12	U
79-34-5-----	1,1,2,2-Tetrachloroethane	12	U
108-88-3-----	Toluene	12	U
108-90-7-----	Chlorobenzene	12	U
100-41-4-----	Ethylbenzene	12	U
100-42-5-----	Styrene	12	U
1330-20-7-----	Xylene (Total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM204

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835298

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035298B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 14

Date Analyzed: 12/23/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	26	R
2.	LABORATORY ARTIFACT	16.51	7	R
3.	LABORATORY ARTIFACT	19.21	16	R
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment

OLM03.0

ecology and environment

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM205

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835299

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035299B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/23/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM205

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835299

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035299B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/23/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.82	18.5	R
2.	LABORATORY ARTIFACT	16.51	6.5	R
3.	LABORATORY ARTIFACT	19.20	14.5	R
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

[Signature]
ecology and environment
ecology and environment

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM206

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835300

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035300B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/23/96

GC Column: DB524 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM206

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835300

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035300B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/23/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	24	JB R
2.	LABORATORY ARTIFACT	16.52	36	J R
3.	LABORATORY ARTIFACT	19.21	28	J R
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM207

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835301

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035301B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/23/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM207

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835301

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035301B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/23/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	26 JB	R
2.	LABORATORY ARTIFACT	19.20	15 J	R
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM208

Lab Name: COMPU-~~HEM~~ ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835302

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035302B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 12

Date Analyzed: 12/23/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
57-64-1-----	Acetone	11	W
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM208

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835302

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035302B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 12

Date Analyzed: 12/23/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	26	JB
2.	LABORATORY ARTIFACT	16.52	38	J
3.	LABORATORY ARTIFACT	19.21	22	I
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM209

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835303

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035303B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM209

Lab Name: COMPU-CHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835303

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035303B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.86	36 JB	
2.	LABORATORY ARTIFACT	19.21	15 J	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
1.1.5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM210

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835372

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035372B51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 11

Date Analyzed: 12/26/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/Kg

Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM210

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835372

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH035372B51

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: not dec. 11 Date Analyzed: 12/26/96

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2 CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	3.87	13	JB
2.	LABORATORY ARTIFACT	16.54	23	I
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM169

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835370

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GH035370A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	380	U
111-44-4-----	bis(2-Chloroethyl) ether	380	U
95-57-8-----	2-Chlorophenol	380	U
541-73-1-----	1,3-Dichlorobenzene	380	U
106-46-7-----	1,4-Dichlorobenzene	380	U
95-50-1-----	1,2-Dichlorobenzene	380	U
95-48-7-----	2-Methylphenol	380	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5-----	4-Methylphenol	380	U
621-64-7-----	N-Nitroso-di-n-propylamine	380	U
67-72-1-----	Hexachloroethane	380	U
98-95-3-----	Nitrobenzene	380	U
78-59-1-----	Isophorone	380	U
88-75-5-----	2-Nitrophenol	380	U
105-67-9-----	2,4-Dimethylphenol	380	U
111-91-1-----	bis(2-Chloroethoxy) methane	380	U
120-83-2-----	2,4-Dichlorophenol	380	U
120-82-1-----	1,2,4-Trichlorobenzene	380	U
91-20-3-----	Naphthalene	380	U
106-47-8-----	4-Chloroaniline	380	U
87-68-3-----	Hexachlorobutadiene	380	U
59-50-7-----	4-Chloro-3-methylphenol	380	U
91-57-6-----	2-Methylnaphthalene	380	U
77-47-4-----	Hexachlorocyclopentadiene	380	U
88-06-2-----	2,4,6-Trichlorophenol	380	U
95-95-4-----	2,4,5-Trichlorophenol	960	U
91-58-7-----	2-Chloronaphthalene	380	U
88-74-4-----	2-Nitroaniline	960	U
131-11-3-----	Dimethylphthalate	380	U
208-96-8-----	Acenaphthylene	380	U
606-20-2-----	2,6-Dinitrotoluene	380	U
99-09-2-----	3-Nitroaniline	960	U
83-32-9-----	Acenaphthene	380	U

[Handwritten signature]
280

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM169

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835370

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GH035370A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	960	U
100-02-7-----	4-Nitrophenol	960	U
132-64-9-----	Dibenzofuran	380	U
121-14-2-----	2,4-Dinitrotoluene	380	U
84-66-2-----	Diethylphthalate	84	J ✓
7005-72-3-----	4-Chlorophenyl-phenylether	380	U
86-73-7-----	Fluorene	380	U
100-01-6-----	4-Nitroaniline	960	U
534-52-1-----	4,6-Dinitro-2-methylphenol	960	U
86-30-6-----	N-nitrosodiphenylamine (1)	380	U
101-55-3-----	4-Bromophenyl-phenylether	380	U
118-74-1-----	Hexachlorobenzene	380	U
87-86-5-----	Pentachlorophenol	960	U
85-01-8-----	Phenanthrene	380	U
120-12-7-----	Anthracene	380	U
86-74-8-----	Carbazole	380	U
84-74-2-----	Di-n-butylphthalate	49	J ✓
206-44-0-----	Fluoranthene	40	J ✓
129-00-0-----	Pyrene	39	J ✓
85-68-7-----	Butylbenzylphthalate	380	U
91-94-1-----	3,3'-Dichlorobenzidine	380	U
56-55-3-----	Benzo(a)anthracene	380	U
218-01-9-----	Chrysene	380	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	60	J ✓
117-84-0-----	Di-n-octylphthalate	380	U
205-99-2-----	Benzo(b)fluoranthene	380	U
207-08-9-----	Benzo(k)fluoranthene	380	U
50-32-8-----	Benzo(a)pyrene	380	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	380	U
53-70-3-----	Dibenzo(a,h)anthracene	380	U
191-24-2-----	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM169

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835370

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GH035370A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 20

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	MEDOL (BC)	4.49	4800	JAB R
2.	UNKNOWN PHTHALATE	14.28	82	J P
3.	UNKNOWN ALCOHOL	14.43	100	J J
4. 57-10-3	HEXADECANOIC ACID	14.91	200	NJ
5.	UNKNOWN	15.10	440	JN
6.	UNKNOWN ALCOHOL	15.75	1500	J
7.	UNKNOWN	16.10	280	J
8.	UNKNOWN	16.21	85	J
9.	UNKNOWN	16.36	2800	J
10.	UNKNOWN	17.05	140	J
11.	UNKNOWN	17.16	120	J
12.	UNKNOWN	17.40	130	J
13.	UNKNOWN (BC)	17.53	680	J R
14.	UNKNOWN ALCOHOL	18.14	100	JN
15.	UNKNOWN	19.59	280	J
16.	UNKNOWN	20.01	140	J
17.	UNKNOWN ALCOHOL	20.19	120	J
18.	UNKNOWN	20.23	92	J
19.	UNKNOWN	21.30	140	J
20.	UNKNOWN	23.20	140	J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM179

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835371

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035371A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 8 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy) methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	900	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	900	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	900	U
83-32-9-----	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM179

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835371

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035371A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 3 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	900	UJ
100-02-7-----	4-Nitrophenol	900	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	56	J ✓
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	900	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	900	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	900	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	48	J ✓
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	UJ
56-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	170	J ✓
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM179

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835371

Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035371A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 8 decanted: (Y/N). N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 24

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.46	4700	JAB
2.	UNKNOWN (BC)	4.72	85	JB
3.	UNKNOWN	12.94	100	JN
4.	UNKNOWN	14.41	80	J
5.	UNKNOWN CARBOXYLIC ACID	14.91	190	J
6.	UNKNOWN	15.09	390	J
7.	UNKNOWN	15.27	1900	J
8.	UNKNOWN	15.39	97	J
9.	UNKNOWN	15.62	100	J
10.	UNKNOWN ALCOHOL	15.75	1900	J
11.	UNKNOWN	16.10	300	J
12.	UNKNOWN	16.21	240	J
13.	UNKNOWN	16.29	140	J
14.	UNKNOWN	16.36	3300	J
15.	UNKNOWN ALCOHOL	17.01	200	J
16.	UNKNOWN	17.16	92	JN
17.	UNKNOWN (BC)	17.28	92	JB
18.	UNKNOWN	17.41	120	JN
19.	UNKNOWN	17.56	17000	J
20.	UNKNOWN	17.93	81	J
21.	UNKNOWN	18.13	120	J
22.	UNKNOWN	19.16	95	J
23.	UNKNOWN AMIDE	19.59	390	J
24.	UNKNOWN	20.01	140	J
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM199

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835285

Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035285A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	380 U	
111-44-4	bis(2-Chloroethyl) ether	380 U	
95-57-8	2-Chlorophenol	380 U	
541-73-1	1,3-Dichlorobenzene	380 U	
106-46-7	1,4-Dichlorobenzene	380 U	
95-50-1	1,2-Dichlorobenzene	380 U	
95-48-7	2-Methylphenol	380 U	
108-60-1	2,2'-oxybis(1-Chloropropane)	380 U	
106-44-5	4-Methylphenol	380 U	
621-64-7	N-Nitroso-di-n-propylamine	380 U	
67-72-1	Hexachloroethane	380 U	
98-95-3	Nitrobenzene	380 U	
78-59-1	Isophorone	380 U	
88-75-5	2-Nitrophenol	380 U	
105-67-9	2,4-Dimethylphenol	380 U	
111-91-1	bis(2-Chloroethoxy) methane	380 U	
120-83-2	2,4-Dichlorophenol	380 U	
120-82-1	1,2,4-Trichlorobenzene	380 U	
91-20-3	Naphthalene	380 U	
106-47-8	4-Chloroaniline	380 U	
87-68-3	Hexachlorobutadiene	380 U	
59-50-7	4-Chloro-3-methylphenol	380 U	
91-57-6	2-Methylnaphthalene	380 U	
77-47-4	Hexachlorocyclopentadiene	380 U	
88-06-2	2,4,6-Trichlorophenol	380 U	
95-95-4	2,4,5-Trichlorophenol	960 U	
91-58-7	2-Chloronaphthalene	380 U	
88-74-4	2-Nitroaniline	960 U	
131-11-3	Dimethylphthalate	380 U	
208-96-8	Acenaphthylene	380 U	
606-20-2	2,6-Dinitrotoluene	380 U	
99-09-2	3-Nitroaniline	960 U	
83-32-9	Acenaphthene	380 U	

[Handwritten signature]
374

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM199

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835285

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035285A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	960	U
100-02-7-----	4-Nitrophenol	960	U
132-64-9-----	Dibenzofuran	380	U
121-14-2-----	2,4-Dinitrotoluene	380	U
84-66-2-----	Diethylphthalate	240	J
7005-72-3-----	4-Chlorophenyl-phenylether	380	U
86-73-7-----	Fluorene	380	U
100-01-6-----	4-Nitroaniline	960	U
534-52-1-----	4,6-Dinitro-2-methylphenol	960	U
86-30-6-----	N-nitrosodiphenylamine (1)	380	U
101-55-3-----	4-Bromophenyl-phenylether	380	U
118-74-1-----	Hexachlorobenzene	380	U
87-86-5-----	Pentachlorophenol	960	U
85-01-8-----	Phenanthrene	380	U
120-12-7-----	Anthracene	380	U
86-74-8-----	Carbazole	380	U
84-74-2-----	Di-n-butylphthalate	380	U
206-44-0-----	Fluoranthene	380	U
129-00-0-----	Pyrene	380	U
85-68-7-----	Butylbenzylphthalate	380	U
91-94-1-----	3,3'-Dichlorobenzidine	380	U
56-55-3-----	Benzo(a)anthracene	380	U
218-01-9-----	Chrysene	380	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	86	J
117-84-0-----	Di-n-octylphthalate	380	U
205-99-2-----	Benzo(b)fluoranthene	380	U
207-08-9-----	Benzo(k)fluoranthene	380	U
50-32-8-----	Benzo(a)pyrene	380	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	380	U
53-70-3-----	Dibenzo(a,h)anthracene	380	U
191-24-2-----	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM199

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835285

Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035285A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

Number TICs found: 25 CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDE (BC)	4.49	6100	JAB
2.	UNKNOWN (BC)	4.71	100	JB
3.	UNKNOWN	14.45	85	J
4.	UNKNOWN	14.87	94	J
5.	UNKNOWN CARBOXYLIC ACID	14.91	340	J
6.	UNKNOWN	15.10	200	J
7.	UNKNOWN	16.11	140	J
8.	UNKNOWN	16.21	92	J
9.	UNKNOWN	17.05	110	J
10.	UNKNOWN	17.16	110	J
11.	UNKNOWN	17.54	370	J
12.	UNKNOWN ALDEHYDE	17.78	79	J
13.	UNKNOWN ALCOHOL	18.13	540	J
14.	UNKNOWN	19.18	380	J
15.	UNKNOWN AMIDE	19.59	290	J
16.	UNKNOWN	20.16	270	J
17.	UNKNOWN	20.90	220	J
18.	UNKNOWN ALCOHOL	21.29	480	J
19.	UNKNOWN	22.44	160	J
20.	UNKNOWN	22.65	200	J
21.	UNKNOWN	23.19	540	J
22.	UNKNOWN	23.34	110	J
23.	UNKNOWN	23.58	100	J
24.	UNKNOWN	24.38	100	J
25.	UNKNOWN	24.52	200	J
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM200

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199
Matrix: (soil/water) SOIL Lab Sample ID: 835294
Sample wt/vol: 30.1 (g/mL) g Lab File ID: GJ035294C64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 12 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy) methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	940	U
131-11-3	Dimethylphthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	940	U
83-32-9	Acenaphthene	370	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM200

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835294

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GJ035294C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	940	U
100-02-7-----	4-Nitrophenol	940	U
132-64-9-----	Dibenzofuran	370	U
121-14-2-----	2,4-Dinitrotoluene	370	U
84-66-2-----	Diethylphthalate	150	J
7005-72-3-----	4-Chlorophenyl-phenylether	370	U
86-73-7-----	Fluorene	370	U
100-01-6-----	4-Nitroaniline	940	U
534-52-1-----	4,6-Dinitro-2-methylphenol	940	U
86-30-6-----	N-nitrosodiphenylamine (1)	370	U
101-55-3-----	4-Bromophenyl-phenylether	370	U
118-74-1-----	Hexachlorobenzene	370	U
37-86-5-----	Pentachlorophenol	940	U
85-01-8-----	Phenanthrene	370	U
120-12-7-----	Anthracene	370	U
86-74-8-----	Carbazole	370	U
84-74-2-----	Di-n-butylphthalate	370	U
206-44-0-----	Fluoranthene	370	U
129-00-0-----	Pyrene	370	U
85-68-7-----	Butylbenzylphthalate	370	U
91-94-1-----	3,3'-Dichlorobenzidine	370	U
56-55-3-----	Benzo(a)anthracene	370	U
218-01-9-----	Chrysene	370	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	82	J
117-84-0-----	Di-n-octylphthalate	370	U
205-99-2-----	Benzo(b)fluoranthene	370	U
207-08-9-----	Benzo(k)fluoranthene	370	U
50-32-8-----	Benzo(a)pyrene	370	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	370	U
53-70-3-----	Dibenzo(a,h)anthracene	370	U
191-24-2-----	Benzo(g,h,i)perylene	370	U

(1) - Cannot be separated from Diphenylamine

[Signature] 12/21/97 413

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM200

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835294

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GJ035294C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.5

Number TICs found: 30

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.48	3700	JAB
2. 57-10-3	HEXADECANOIC ACID	14.92	300	NJ
3.	UNKNOWN	16.09	320	JN
4.	UNKNOWN	16.13	340	J
5.	UNKNOWN	16.22	650	J
6.	UNKNOWN	16.34	640	J
7.	TRIMETHYLPHENANTHRENE	16.40	350	J
8.	UNKNOWN	16.66	660	J
9.	UNKNOWN	16.76	630	J
10.	UNKNOWN	16.83	870	J
11.	TRIMETHYLPHENANTHRENE	16.91	470	J
12.	UNKNOWN	17.05	960	J
13.	UNKNOWN	17.12	310	J
14.	UNKNOWN	17.18	390	J
15.	UNKNOWN	17.28	540	J
16.	UNKNOWN	17.39	410	J
17.	UNKNOWN	17.48	290	J
18.	UNKNOWN	17.53	520	J
19.	UNKNOWN	19.29	420	J
20.	UNKNOWN	19.60	460	J
21.	UNKNOWN	19.86	380	J
22.	UNKNOWN	19.94	440	J
23.	UNKNOWN	20.00	380	J
24.	UNKNOWN	20.17	520	J
25.	UNKNOWN	20.51	380	J
26.	UNKNOWN	20.64	340	J
27.	UNKNOWN	20.82	390	J
28.	UNKNOWN	20.93	360	J
29.	UNKNOWN	21.06	290	J
30.	UNKNOWN	21.35	440	JN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM204

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835298

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035298A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

108-95-2-----	Phenol	380	U
111-44-4-----	bis(2-Chloroethyl) ether	380	U
95-57-8-----	2-Chlorophenol	380	U
541-73-1-----	1,3-Dichlorobenzene	380	U
106-46-7-----	1,4-Dichlorobenzene	380	U
95-50-1-----	1,2-Dichlorobenzene	380	U
95-48-7-----	2-Methylphenol	380	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5-----	4-Methylphenol	380	U
621-64-7-----	N-Nitroso-di-n-propylamine	380	U
67-72-1-----	Hexachloroethane	380	U
98-95-3-----	Nitrobenzene	380	U
78-59-1-----	Isophorone	380	U
88-75-5-----	2-Nitrophenol	380	U
105-67-9-----	2,4-Dimethylphenol	380	U
111-91-1-----	bis(2-Chloroethoxy) methane	380	U
120-83-2-----	2,4-Dichlorophenol	380	U
120-82-1-----	1,2,4-Trichlorobenzene	380	U
91-20-3-----	Naphthalene	380	U
106-47-8-----	4-Chloroaniline	380	U
87-68-3-----	Hexachlorobutadiene	380	U
59-50-7-----	4-Chloro-3-methylphenol	380	U
91-57-6-----	2-Methylnaphthalene	380	U
77-47-4-----	Hexachlorocyclopentadiene	380	U
88-06-2-----	2,4,5-Trichlorophenol	380	U
95-95-4-----	2,4,5-Trichlorophenol	960	U
91-58-7-----	2-Chloronaphthalene	380	U
38-74-4-----	2-Nitroaniline	960	U
131-11-3-----	Dimethylphthalate	380	U
208-96-8-----	Acenaphthylene	380	U
606-20-2-----	2,6-Dinitrotoluene	380	U
99-09-2-----	3-Nitroaniline	960	U
83-32-9-----	Acenaphthene	380	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM204

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835298

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035298A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

51-28-5-----	2,4-Dinitrophenol	960	U
100-02-7-----	4-Nitrophenol	960	U
132-64-9-----	Dibenzofuran	380	U
121-14-2-----	2,4-Dinitrotoluene	380	U
84-66-2-----	Diethylphthalate	180	J
7005-72-3-----	4-Chlorophenyl-phenylether	380	U
86-73-7-----	Fluorene	380	U
100-01-6-----	4-Nitroaniline	960	U
534-52-1-----	4,6-Dinitro-2-methylphenol	960	U
86-30-5-----	N-nitrosodiphenylamine (1)	380	U
101-55-3-----	4-Bromophenyl-phenylether	380	U
118-74-1-----	Hexachlorobenzene	380	U
87-86-5-----	Pentachlorophenol	960	U
85-01-8-----	Phenanthrene	380	U
120-12-7-----	Anthracene	380	U
86-74-8-----	Carbazole	380	U
84-74-2-----	Di-n-butylphthalate	66	J
206-44-0-----	Fluoranthene	100	J
129-00-0-----	Pyrene	71	J
85-68-7-----	Butylbenzylphthalate	380	U
91-94-1-----	3,3'-Dichlorobenzidine	380	U
56-55-3-----	Benzo(a)anthracene	380	U
218-01-9-----	Chrysene	52	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	270	J
117-84-0-----	Di-n-octylphthalate	380	U
205-99-2-----	Benzo(b)fluoranthene	80	XJ
207-08-9-----	Benzo(k)fluoranthene	77	XJ
50-32-8-----	Benzo(a)pyrene	380	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	26	J
53-70-3-----	Dibenzo(a,h)anthracene	380	U
191-24-2-----	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM204

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835298

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035298A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 14 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

CONCENTRATION UNITS:

Number TICs found: 30

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN (30)	4.49	6400	JN
2.	UNKNOWN	5.75	100	JN
3.	UNKNOWN	12.94	220	J
4.	UNKNOWN PHTHALATE	14.28	110	J
5.	UNKNOWN	14.41	120	J
6.	UNKNOWN CARBOXYLIC ACID	14.92	410	J
7.	UNKNOWN	15.09	640	J
8.	UNKNOWN	15.29	4000	J
9.	UNKNOWN	15.62	200	J
10.	UNKNOWN ALCOHOL	15.75	470	J
11.	UNKNOWN	16.10	390	J
12.	UNKNOWN	16.21	200	J
13.	UNKNOWN	16.36	1200	J
14.	55591-16-7 S-INDACENE-1,7-DIONE, 2,3,5,	17.16	140	NJ
15.	UNKNOWN	17.28	140	J
16.	UNKNOWN	17.40	150	J
17.	UNKNOWN	17.57	24000	J
18.	UNKNOWN ALDEHYDE	17.78	100	J
19.	UNKNOWN	17.94	120	J
20.	UNKNOWN	18.13	820	J
21.	UNKNOWN ALDEHYDE	18.86	460	J
22.	UNKNOWN AMIDE	19.59	360	J
23.	UNKNOWN	20.01	230	J
24.	UNKNOWN	20.22	120	J
25.	UNKNOWN ALDEHYDE	20.88	290	J
26.	UNKNOWN ALCOHOL	21.27	430	J
27.	UNKNOWN	21.91	160	J
28.	UNKNOWN	22.41	160	J
29.	UNKNOWN	23.18	840	J
30.	UNKNOWN	24.52	340	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM205

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835299

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035299A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy) methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM205

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835299

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035299A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	910	U J
100-02-7-----	4-Nitrophenol	910	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	120	J
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-5-----	4-Nitroaniline	910	U J
534-52-1-----	4,6-Dinitro-2-methylphenol	910	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	910	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	63	J
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	U J
55-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	58	J
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

Handwritten signature and date: 12/29/96

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM205

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835299

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035299A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.6

Number TICs found: 25

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	5700	JAB R
2.	UNKNOWN (BC)	4.72	95	JB R
3.	UNKNOWN PHTHALATE	14.28	110	JN
4.	UNKNOWN ALCOHOL	14.41	120	JV
5. 57-10-3	HEXADECANOIC ACID	14.91	290	NJ
6.	UNKNOWN	15.09	620	J
7.	UNKNOWN	15.38	79	J
8.	UNKNOWN ALCOHOL	15.75	1000	J
9.	UNKNOWN	16.10	500	J
10.	UNKNOWN	16.21	410	J
11.	UNKNOWN	16.30	160	J
12.	UNKNOWN	16.36	2500	J
13.	UNKNOWN	17.05	84	J
14.	UNKNOWN	17.16	140	J
15.	UNKNOWN	17.39	180	J
16.	UNKNOWN	17.53	470	J
17.	UNKNOWN ALCOHOL	18.13	280	J
18.	UNKNOWN ALCOHOL	19.18	170	J
19.	UNKNOWN AMIDE	19.59	390	J
20.	UNKNOWN	21.27	110	J
21.	UNKNOWN	21.56	100	J
22.	UNKNOWN	22.41	110	J
23.	UNKNOWN	23.19	320	J
24.	UNKNOWN	23.85	90	J
25.	UNKNOWN	24.52	98	J
26.				
27.				
28.				
29.				
30.				

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM205

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835300

Sample wt/vol: 30.2 (g/mL) g Lab File ID: GJ035300C64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 13-- decanted: (Y/N) N-- Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
93-95-3	Nitrobenzene	380	U
73-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy) methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	950	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	950	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	950	U
83-32-9	Acenaphthene	380	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM206

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835300

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GJ035300C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

51-28-5-----	2,4-Dinitrophenol	950	U
100-02-7-----	4-Nitrophenol	950	U
132-64-9-----	Dibenzofuran	380	U
121-14-2-----	2,4-Dinitrotoluene	380	U
84-66-2-----	Diethylphthalate	230	J
7005-72-3-----	4-Chlorophenyl-phenylether	380	U
86-73-7-----	Fluorene	380	U
100-01-6-----	4-Nitroaniline	950	U
534-52-1-----	4,6-Dinitro-2-methylphenol	950	U
86-30-6-----	N-nitrosodiphenylamine (1)	380	U
101-55-3-----	4-Bromophenyl-phenylether	380	U
118-74-1-----	Hexachlorobenzene	380	U
87-86-5-----	Pentachlorophenol	950	U
85-01-8-----	Phenanthrene	380	U
120-12-7-----	Anthracene	380	U
86-74-8-----	Carbazole	380	U
84-74-2-----	Di-n-butylphthalate	380	U
206-44-0-----	Fluoranthene	380	U
129-00-0-----	Pyrene	380	U
85-68-7-----	Butylbenzylphthalate	380	U
91-94-1-----	3,3'-Dichlorobenzidine	380	U
56-55-3-----	Benzo(a)anthracene	380	U
218-01-9-----	Chrysene	380	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	53	J
117-84-0-----	Di-n-octylphthalate	380	U
205-99-2-----	Benzo(b)fluoranthene	380	U
207-08-9-----	Benzo(k)fluoranthene	380	U
50-32-8-----	Benzo(a)pyrene	380	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	380	U
53-70-3-----	Dibenzo(a,h)anthracene	380	U
191-24-2-----	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM205

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835300

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GJ035300C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 11

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	5700	JAB
2.	UNKNOWN (BC)	4.71	100	JB
3.	UNKNOWN	14.42	77	JN
4.	UNKNOWN CARBOXYLIC ACID	14.91	120	J
5.	UNKNOWN	15.09	410	J
6.	UNKNOWN	15.78	110	J
7.	UNKNOWN	16.11	110	J
8.	UNKNOWN	16.36	81	J
9.	UNKNOWN	17.15	140	J
10.	UNKNOWN	17.52	210	J
11.	UNKNOWN AMIDE	19.59	230	J
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM207

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835301

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035301A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	380	U
111-44-4-----	bis(2-Chloroethyl) ether	380	U
95-57-8-----	2-Chlorophenol	380	U
541-73-1-----	1,3-Dichlorobenzene	380	U
106-46-7-----	1,4-Dichlorobenzene	380	U
95-50-1-----	1,2-Dichlorobenzene	380	U
95-48-7-----	2-Methylphenol	380	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5-----	4-Methylphenol	380	U
621-64-7-----	N-Nitroso-di-n-propylamine	380	U
67-72-1-----	Hexachloroethane	380	U
98-95-3-----	Nitrobenzene	380	U
78-59-1-----	Isophorone	380	U
88-75-5-----	2-Nitrophenol	380	U
105-67-9-----	2,4-Dimethylphenol	380	U
111-91-1-----	bis(2-Chloroethoxy)methane	380	U
120-83-2-----	2,4-Dichlorophenol	380	U
120-82-1-----	1,2,4-Trichlorobenzene	380	U
91-20-3-----	Naphthalene	380	U
106-47-8-----	4-Chloroaniline	380	U
87-68-3-----	Hexachlorobutadiene	380	U
59-50-7-----	4-Chloro-3-methylphenol	380	U
91-57-6-----	2-Methylnaphthalene	380	U
77-47-4-----	Hexachlorocyclopentadiene	380	U
88-06-2-----	2,4,6-Trichlorophenol	380	U
95-95-4-----	2,4,5-Trichlorophenol	950	U
91-58-7-----	2-Chloronaphthalene	380	U
88-74-4-----	2-Nitroaniline	950	U
131-11-3-----	Dimethylphthalate	380	U
208-96-8-----	Acenaphthylene	380	U
606-20-2-----	2,6-Dinitrotoluene	380	U
99-09-2-----	3-Nitroaniline	950	U
33-32-9-----	Acenaphthene	380	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM207

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835301

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035301A54

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	950	U
100-02-7-----	4-Nitrophenol	950	U
132-64-9-----	Dibenzofuran	380	U
121-14-2-----	2,4-Dinitrotoluene	380	U
84-66-2-----	Diethylphthalate	180	J
7005-72-3-----	4-Chlorophenyl-phenylether	380	U
86-73-7-----	Fluorene	380	U
100-01-6-----	4-Nitroaniline	950	U
534-52-1-----	4,6-Dinitro-2-methylphenol	950	U
86-30-6-----	N-nitrosodiphenylamine (1)	380	U
101-55-3-----	4-Bromophenyl-phenylether	380	U
118-74-1-----	Hexachlorobenzene	380	U
87-86-5-----	Pentachlorophenol	950	U
85-01-8-----	Phenanthrene	380	U
120-12-7-----	Anthracene	380	U
86-74-8-----	Carbazole	380	U
84-74-2-----	Di-n-butylphthalate	53	J
206-44-0-----	Fluoranthene	380	U
129-00-0-----	Pyrene	380	U
85-68-7-----	Butylbenzylphthalate	380	U
91-94-1-----	3,3'-Dichlorobenzidine	380	U
56-55-3-----	Benzo(a)anthracene	380	U
218-01-9-----	Chrysene	380	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	69	J
117-84-0-----	Di-n-octylphthalate	380	U
205-99-2-----	Benzo(b)fluoranthene	380	U
207-08-9-----	Benzo(k)fluoranthene	380	U
50-32-8-----	Benzo(a)pyrene	380	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	380	U
53-70-3-----	Dibenzo(a,h)anthracene	380	U
191-24-2-----	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM207

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199
Matrix: (soil/water) SOIL Lab Sample ID: 835301
Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035301A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 13 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.5

Number TICs found: 18

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	4900	JAB R
2.	UNKNOWN (BC)	4.72	86	JB R
3.	UNKNOWN	14.41	87	JN
4. 57-10-3	HEXADECANOIC ACID	14.91	330	NJ
5.	UNKNOWN	15.09	460	J
6.	UNKNOWN	16.10	270	J
7.	UNKNOWN	16.36	250	J
8.	UNKNOWN	17.05	100	J
9.	UNKNOWN	17.16	120	J
10.	UNKNOWN	17.40	120	J
11.	UNKNOWN	17.53	370	J
12.	UNKNOWN ALCOHOL	18.13	330	J
13.	UNKNOWN	19.17	250	J
14.	UNKNOWN AMIDE	19.59	240	J
15.	UNKNOWN ALDEHYDE	19.85	95	J
16.	UNKNOWN	21.28	120	J
17.	UNKNOWN	21.62	100	J
18.	UNKNOWN	23.19	520	J ✓
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM208

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835302

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GH035302A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

108-95-2-----	Phenol	370	U
111-44-4-----	bis(2-Chloroethyl) ether	370	U
95-57-8-----	2-Chlorophenol	370	U
541-73-1-----	1,3-Dichlorobenzene	370	U
106-46-7-----	1,4-Dichlorobenzene	370	U
95-50-1-----	1,2-Dichlorobenzene	370	U
95-48-7-----	2-Methylphenol	370	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5-----	4-Methylphenol	370	U
621-64-7-----	N-Nitroso-di-n-propylamine	370	U
67-72-1-----	Hexachloroethane	370	U
98-95-3-----	Nitrobenzene	370	U
78-59-1-----	Isophorone	370	U
88-75-5-----	2-Nitrophenol	370	U
105-67-9-----	2,4-Dimethylphenol	370	U
111-91-1-----	bis(2-Chloroethoxy) methane	370	U
120-83-2-----	2,4-Dichlorophenol	370	U
120-82-1-----	1,2,4-Trichlorobenzene	370	U
91-20-3-----	Naphthalene	370	U
106-47-8-----	4-Chloroaniline	370	U
87-68-3-----	Hexachlorobutadiene	370	U
59-50-7-----	4-Chloro-3-methylphenol	370	U
91-57-6-----	2-Methylnaphthalene	370	U
77-47-4-----	Hexachlorocyclopentadiene	370	U
88-06-2-----	2,4,6-Trichlorophenol	370	U
95-95-4-----	2,4,5-Trichlorophenol	940	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	940	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	940	U
83-32-9-----	Acenaphthene	370	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM208

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835302

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GH035302A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
51-28-5-----	2,4-Dinitrophenol	940 U	J
100-02-7-----	4-Nitrophenol	940 U	J
132-64-9-----	Dibenzofuran	370 U	
121-14-2-----	2,4-Dinitrotoluene	370 U	
84-66-2-----	Diethylphthalate	160 J	
7005-72-3-----	4-Chlorophenyl-phenylether	370 U	
86-73-7-----	Fluorene	370 U	
100-01-6-----	4-Nitroaniline	940 U	J
534-52-1-----	4,6-Dinitro-2-methylphenol	940 U	
86-30-6-----	N-nitrosodiphenylamine (1)	370 U	
101-55-3-----	4-Bromophenyl-phenylether	370 U	
118-74-1-----	Hexachlorobenzene	370 U	
37-86-5-----	Pentachlorophenol	940 U	
85-01-8-----	Phenanthrene	370 U	
120-12-7-----	Anthracene	370 U	
86-74-8-----	Carbazole	370 U	
84-74-2-----	Di-n-butylphthalate	49 J	
206-44-0-----	Fluoranthene	370 U	
129-00-0-----	Pyrene	370 U	
85-68-7-----	Butylbenzylphthalate	370 U	
91-94-1-----	3,3'-Dichlorobenzidine	370 U	J
56-55-3-----	Benzo(a)anthracene	370 U	
218-01-9-----	Chrysene	370 U	
117-81-7-----	bis(2-Ethylhexyl)phthalate	47 J	
117-84-0-----	Di-n-octylphthalate	370 U	
205-99-2-----	Benzo(b)fluoranthene	370 U	
207-08-9-----	Benzo(k)fluoranthene	370 U	
50-32-8-----	Benzo(a)pyrene	370 U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	370 U	
53-70-3-----	Dibenzo(a,h)anthracene	370 U	
191-24-2-----	Benzo(g,h,i)perylene	370 U	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM208

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835302

Sample wt/vol: 30.2 (g/mL) g Lab File ID: GH035302A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 27

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALCOH (BC)	14.18	4100	JAD
2.	UNKNOWN PHTHALATE	14.28	87	JN
3.	UNKNOWN	14.41	120	J
4. 57-10-3	HEXADECANOIC ACID	14.91	260	NJ
5.	UNKNOWN	15.09	550	J
6.	UNKNOWN ALCOHOL	15.75	190	J
7.	UNKNOWN	16.10	210	J
8.	UNKNOWN	16.36	530	J
9.	UNKNOWN	16.76	100	J
10.	UNKNOWN	17.04	140	J
11.	UNKNOWN	17.16	140	J
12.	UNKNOWN	17.40	150	J
13.	UNKNOWN	17.53	400	J
14.	UNKNOWN ALCOHOL	18.13	490	J
15.	UNKNOWN ALDEHYDE	18.84	130	J
16.	UNKNOWN AMIDE	19.59	380	J
17.	UNKNOWN ALDEHYDE	19.85	160	J
18.	UNKNOWN	20.15	130	J
19.	UNKNOWN ALDEHYDE	20.88	91	J
20.	UNKNOWN	21.28	190	J
21.	UNKNOWN	22.42	88	J
22.	UNKNOWN	23.19	690	J
23.	UNKNOWN	23.35	120	J
24.	UNKNOWN	23.64	93	J
25.	UNKNOWN	23.85	150	J
26.	UNKNOWN	24.36	140	J
27.	UNKNOWN	24.52	290	J
28.				
29.				
30.				

[Handwritten signature]
633

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM209

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835303

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035303A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	380	U
111-44-4-----	bis(2-Chloroethyl) ether	380	U
95-57-8-----	2-Chlorophenol	380	U
541-73-1-----	1,3-Dichlorobenzene	380	U
106-46-7-----	1,4-Dichlorobenzene	380	U
95-50-1-----	1,2-Dichlorobenzene	380	U
95-48-7-----	2-Methylphenol	380	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5-----	4-Methylphenol	380	U
521-64-7-----	N-Nitroso-di-n-propylamine	380	U
57-72-1-----	Hexachloroethane	380	U
98-95-3-----	Nitrobenzene	380	U
78-59-1-----	Isophorone	380	U
88-75-5-----	2-Nitrophenol	380	U
105-67-9-----	2,4-Dimethylphenol	380	U
111-91-1-----	bis(2-Chloroethoxy) methane	380	U
120-83-2-----	2,4-Dichlorophenol	380	U
120-82-1-----	1,2,4-Trichlorobenzene	380	U
91-20-3-----	Naphthalene	380	U
106-47-8-----	4-Chloroaniline	380	U
87-68-3-----	Hexachlorobutadiene	380	U
59-50-7-----	4-Chloro-3-methylphenol	380	U
91-57-6-----	2-Methylnaphthalene	380	U
77-47-4-----	Hexachlorocyclopentadiene	380	U
88-06-2-----	2,4,6-Trichlorophenol	380	U
95-95-4-----	2,4,5-Trichlorophenol	950	U
91-58-7-----	2-Chloronaphthalene	380	U
33-74-4-----	2-Nitroaniline	950	U
131-11-3-----	Dimethylphthalate	380	U
208-96-8-----	Acenaphthylene	380	U
506-20-2-----	2,6-Dinitrotoluene	380	U
99-09-2-----	3-Nitroaniline	950	U
83-32-9-----	Acenaphthene	380	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM209

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199
Matrix: (soil/water) SOIL Lab Sample ID: 835303
Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035303A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 13 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/Kg Q
51-28-5	2,4-Dinitrophenol	950	U
100-02-7	4-Nitrophenol	950	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	160	J
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
85-30-6	N-nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)phthalate	74	J
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)fluoranthene	380	U
50-32-8	Benzo(a)pyrene	380	U
193-39-5	Indeno(1,2,3-cd)pyrene	380	U
53-70-3	Dibenzo(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM209

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835303

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035303A54

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.6

CONCENTRATION UNITS:

Number TICs found: 13

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	1.19	4800	JAB
2.	UNKNOWN (BC)	1.72	78	JB
3.	UNKNOWN CARBOXYLIC ACID	14.91	210	JD
4.	UNKNOWN	15.09	99	J
5.	UNKNOWN	17.05	82	J
6.	UNKNOWN	17.16	84	J
7.	UNKNOWN	18.13	510	J
8.	UNKNOWN ALCOHOL	19.18	290	J
9.	UNKNOWN AMIDE	19.59	230	J
10.	UNKNOWN	21.29	140	J
11.	UNKNOWN	23.18	410	J
12.	UNKNOWN	23.34	110	J
13.	UNKNOWN	24.52	120	J V
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM210

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835372

Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035372A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: - 0 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy) methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
605-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM210

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835372

Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035372A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
51-28-5	2,4-Dinitrophenol	830	U J
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	50	J
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	830	U J
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	39	J
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	95	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM210

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835372

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035372A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 0 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/29/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: _____

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	4700	JAB
2.	UNKNOWN (BC)	4.72	79	JB
3.	UNKNOWN	14.41	68	JN
4.	UNKNOWN CARBOXYLIC ACID	14.91	250	J
5.	UNKNOWN	15.10	300	J
6.	UNKNOWN ALCOHOL	15.75	2000	J
7.	UNKNOWN	16.10	250	J
8.	UNKNOWN CARBOXYLIC ACID	16.20	270	J
9.	UNKNOWN	16.29	130	J
10.	UNKNOWN	16.36	3400	J
11.	UNKNOWN ALCOHOL	17.00	490	J
12.	UNKNOWN	17.16	100	J
13.	UNKNOWN	17.41	210	J
14.	UNKNOWN (BC)	17.53	580	JB
15.	UNKNOWN	17.65	71	JN
16.	UNKNOWN ALCOHOL	18.13	190	J
17.	UNKNOWN AMIDE	19.59	1200	J
18.	UNKNOWN	19.74	85	J
19.	UNKNOWN	20.99	100	J
20.	UNKNOWN	22.09	160	J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

01/01/97

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM169

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835370

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: _____

% Moisture: 14 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/24/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	0.23	JY
76-44-8-----	Heptachlor	0.46	JY
309-00-2-----	Aldrin	0.34	JY
1024-57-3-----	Heptachlor epoxide	2.0	U
959-98-8-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	1.2	J
72-55-9-----	4,4'-DDE	3.8	U
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	3.8	U
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	3.8	U
72-43-5-----	Methoxychlor	20 0.52	JPB
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	3.8	U
5103-71-9-----	alpha-Chlordane	2.0	U
5103-74-2-----	gamma-Chlordane	2.0	U
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	78	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	27	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM179

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835371

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: _____

% Moisture: 8 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/24/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.6

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----alpha-BHC	1.8	U
319-85-7-----beta-BHC	1.8	U
319-85-8-----delta-BHC	1.8	U
58-89-9-----gamma-BHC (Lindane)	1.8	U
76-44-8-----Heptachlor	1.8	U
309-00-2-----Aldrin	0.63	JP
1024-57-3-----Heptachlor epoxide	1.8 0.32	JP 4
959-98-8-----Endosulfan I	1.8	U
60-57-1-----Dieldrin	3.6	U
72-55-9-----4,4'-DDE	3.6	U
72-20-8-----Endrin	3.6	U
33213-65-9-----Endosulfan II	3.6	U
72-54-8-----4,4'-DDD	3.6	U
1031-07-8-----Endosulfan sulfate	3.6	U
50-29-3-----4,4'-DDT	3.6	U
72-43-5-----Methoxychlor	18	U
53494-70-5-----Endrin ketone	3.6	U
7421-93-4-----Endrin aldehyde	3.6	U
5103-71-9-----alpha-Chlordane	1.8	U
5103-74-2-----gamma-Chlordane	1.8	U
8001-35-2-----Toxaphene	180	U
12674-11-2-----Aroclor-1016	36	U
11104-28-2-----Aroclor-1221	72	U
11141-16-5-----Aroclor-1232	36	U
53469-21-9-----Aroclor-1242	36	U
12672-29-6-----Aroclor-1248	36	U
11097-69-1-----Aroclor-1254	36	U
11096-82-5-----Aroclor-1260	36	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM199

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835285

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: _____

% Moisture: 14 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	2.0	U
76-44-8-----	Heptachlor	2.0	U
309-00-2-----	Aldrin	2.0	U
1024-57-3-----	Heptachlor epoxide	2.0	U
959-98-8-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	3.8	U
72-55-9-----	4,4'-DDE	0.20	JP
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	3.8	U
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	3.8	U
72-43-5-----	Methoxychlor	0.49	JPS 4
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	3.8	U
5103-71-9-----	alpha-Chlordane	0.24	JP
5103-74-2-----	gamma-Chlordane	2.0	U
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	78	U
11141-16-5-----	Aroclor-1232	38	U
53459-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM200

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835294

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.5

Sulfur Cleanup: (Y/N) N

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	0.085	JF
72-55-9-----	4,4'-DDE	0.26	JF
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	8.1	B
72-43-5-----	Methoxychlor	19.1	JF 4
53494-70-5-----	Endrin ketone	0.19	JF
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	0.23	JF
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	76	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM201

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835295

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 18 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
75-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	2.0	U
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	0.046	JP
72-55-9	4,4'-DDE	4.0	U
72-20-8	Endrin	4.0	U
33213-65-9	Endosulfan II	4.0	U
72-54-8	4,4'-DDD	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
50-29-3	4,4'-DDT	4.0	U
72-43-5	Methoxychlor	4.0	U
53494-70-5	Endrin ketone	4.0	U
7421-93-4	Endrin aldehyde	4.0	U
5103-71-9	alpha-Chlordane	0.056	JP
5103-74-2	gamma-Chlordane	0.051	JP
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM202

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835296

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: _____

% Moisture: 15 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	2.0	U
76-44-8-----	Heptachlor	0.19	JF
309-00-2-----	Aldrin	2.0	U
1024-57-3-----	Heptachlor epoxide	2.0	U
959-98-8-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	3.8	U
72-55-9-----	4,4'-DDE	0.10	JF
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	3.8	U
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	3.8	U
72-43-5-----	Methoxychlor	3.8	U
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	3.8	U
5103-71-9-----	alpha-Chlordane	0.13	JF
5103-74-2-----	gamma-Chlordane	0.12	JF
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	78	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM203

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835297

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 18 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----alpha-BHC	0.073	JP
319-85-7-----beta-BHC	2.0	U
319-86-8-----delta-BHC	2.0	U
58-89-9-----gamma-BHC (Lindane)	2.0	U
76-44-8-----Heptachlor	0.15	JP
309-00-2-----Aldrin	2.0	U
1024-57-3-----Heptachlor epoxide	2.0	U
959-98-8-----Endosulfan I	2.0	U
60-57-1-----Dieldrin	4.0	U
72-55-9-----4,4'-DDE	4.0	U
72-20-8-----Endrin	4.0	U
33213-65-9-----Endosulfan II	4.0	U
72-54-8-----4,4'-DDD	4.0	U
1031-07-8-----Endosulfan sulfate	4.0	U
50-29-3-----4,4'-DDT	4.0	U
72-43-5-----Methoxychlor	20	U
53494-70-5-----Endrin ketone	4.0	U
7421-93-4-----Endrin aldehyde	4.0	U
5103-71-9-----alpha-Chlordane	2.0	U
5103-74-2-----gamma-Chlordane	2.0	U
8001-35-2-----Toxaphene	200	U
12674-11-2-----Aroclor-1016	40	U
11104-28-2-----Aroclor-1221	81	U
11141-16-5-----Aroclor-1232	40	U
53469-21-9-----Aroclor-1242	40	U
12672-29-6-----Aroclor-1248	40	U
11097-69-1-----Aroclor-1254	40	U
11096-82-5-----Aroclor-1260	40	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM204

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835298

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: _____

% Moisture: 14 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	2.0	U
76-44-8-----	Heptachlor	2.0	U
309-00-2-----	Aldrin	2.0	U
1024-57-3-----	Heptachlor epoxide	0.13	JP
959-98-3-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	0.18	JP
72-55-9-----	4,4'-DDE	3.8	U
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	0.28	JP
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	3.8	U
72-43-5-----	Methoxychlor	3.8	U
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	0.23	JP
5103-71-9-----	alpha-Chlordane	2.0	U
5103-74-2-----	gamma-Chlordane	0.26	J
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	77	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM205

Lab Name: COMPU-CHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835299

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.6

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	1.8	U
319-85-7-----	beta-BHC	1.8	U
319-86-8-----	delta-BHC	1.8	U
58-89-9-----	gamma-BHC (Lindane)	1.8	U
76-44-8-----	Heptachlor	1.8	U
309-00-2-----	Aldrin	1.8	U
1024-57-3-----	Heptachlor epoxide	1.8	U
959-98-8-----	Endosulfan I	1.8	U
60-57-1-----	Dieldrin	3.6	U
72-55-9-----	4,4'-DDE	3.6	U
72-20-8-----	Endrin	3.6	U
33213-65-9-----	Endosulfan II	3.6	U
72-54-8-----	4,4'-DDD	3.6	U
1031-07-8-----	Endosulfan sulfate	3.6	U
50-29-3-----	4,4'-DDT	3.6	U
72-43-5-----	Methoxychlor	3.6	U
53494-70-5-----	Endrin ketone	3.6	U
7421-93-4-----	Endrin aldehyde	3.6	U
5103-71-9-----	alpha-Chlordane	1.8	U
5103-74-2-----	gamma-Chlordane	0.23	U
8001-35-2-----	Toxaphene	180	U
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	73	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM206

Lab Name: COMPU-CHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM199

Matrix: (soil/water) SOIL

Lab Sample ID: 835300

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.8	U
72-55-9-----	4,4'-DDE	3.8	U
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	3.8	U
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	3.8	U
72-43-5-----	Methoxychlor	19	U
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	3.8	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	0.24	JP
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	76	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U

3.8 0.12 JP 4

[Handwritten signature and date 12/24/96]

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM207

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835301

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.8	U
72-55-9	4,4'-DDE	3.8	U
72-20-8	Endrin	3.8	U
33213-65-9	Endosulfan II	3.8	U
72-54-8	4,4'-DDD	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
50-29-3	4,4'-DDT	3.8	U
72-43-5	Methoxychlor	19	U
53494-70-5	Endrin ketone	3.8	U
7421-93-4	Endrin aldehyde	3.8	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	0.22	JP
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	77	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM208

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835302

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	0.11	JP
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	0.31	J
33213-65-9-----	Endosulfan II	0.27	JP
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	19	U
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	0.32	JP
5103-74-2-----	gamma-Chlordane	0.19	JP
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	75	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM209

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199
Matrix: (soil/water) SOIL Lab Sample ID: 835303
Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____
% Moisture: 13 decanted: (Y/N) N Date Received: 12/21/96
Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/23/96
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	1.9	U
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	0.11	J
5103-74-2-----	gamma-Chlordane	0.12	J
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	76	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U

3.7 0.14 JB 4

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM210

Lab Name: COMPU-CHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM199

Matrix: (soil/water) SOIL Lab Sample ID: 835372

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 11 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/24/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	0.069	JY
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	19 2.69 3.7	U
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	75	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U



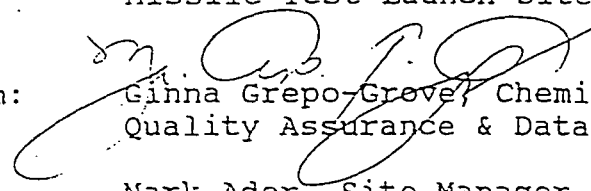
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: OEA-095

January 22, 1997

MEMORANDUM

Subject: Data Validation Report for Full Organic Analysis
(Volatile Organics, Semi-Volatile Organics, Pesticides
and Polychlorinated Biphenyls) of Samples from the Nike
Missile Test Launch Site Case: 25253 SDG: JM166

From:  Ginna Grepo-Grove, Chemist
Quality Assurance & Data Unit, OEA

To: Mark Ader, Site Manager
Office of Environmental Cleanup

The quality assurance (QA) review of 20 soil samples collected from the above referenced site has been completed. These sample were analyzed for volatile organics (VOAs), semi-volatile organics (BNAs), pesticides and polychlorinated biphenyls (Pest/PCBs) in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.1) by Compuchem Environmental Corp., Research Triangle Park, NC. The following samples were reviewed in this report:

JM166	JM167	JM168	JM170
JM171	JM172	JM173	JM174
JM175	JM176	JM177	JM178
JM191	JM192	JM193	JM194
JM195	JM196	JM197	JM198

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.1), and the USEPA CLP National Functional Guidelines for Organic Data Review (2/94).

The conclusions presented herein are based on the information provided for the review.



Holding Time - Acceptable

The soil samples were preserved with ice prior to shipment. All of the samples met the method and technical (40 CFR 136 water criteria) required holding times for all analyses. The Holding Times Summary listing the pertinent collection, extraction and analysis dates is attached at the end of this validation report.

Instrument Performance - Acceptable

A total of one GC and two GC/MS systems were used in all of the analyses (1 GC/MS for VOA, 1 GC/MS for BNAs and 1 GC/ECDs for pest/PCBs). All of the systems met the SOW specified technical acceptance criteria prior to sample analyses i.e, tuning and GC/MS performance checks, resolution checks, retention time, response factors and calibrations. The systems remained stable throughout the course of analyses. Instrument blanks were all clean and there were no indications of carry-over.

Initial Calibrations

Three initial calibrations performed for VOAs, ABNs and pest/PCB analyses were evaluated. All of the initial calibrations performed met the SOW technical acceptance criteria with the exception of the following:

Date of Analysis	Fraction	Compound	%RSD	Associated Samples	Qualifier Detects/Non-Detects
12/19/96	VOA	chloromethane	37.0	All samples	J/None
		vinyl chloride	32.6	All samples	J/None
		acetone	60.7	All samples	J/UJ
12/28/96	BNA	2,4-dinitrophenol	33.7	All samples	UJ/None
		4-nitroaniline	42.3	All samples	UJ/None
		3,3'-dichlorobenzidine	44.4	All samples	UJ/None

Both chloromethane and vinyl chloride initial calibration curves were linear up to 50 ppb. Since none of the chloromethane and vinyl chloride were detected at concentrations over 50 ppb, none of the data were qualified. The two low standards for acetone were not linear. Therefore, both the acetone non-detects and detects at concentrations ≤ 20 ppb were qualified as estimates, "J/UJ". The lowest standards for 2,4-dinitrophenol, 4-nitroaniline and 3,3'-dichlorobenzidine were not linear. Therefore, the quantitation limits for these three BNA compounds were qualified as estimated, "UJ".

Continuing Calibrations

All of the continuing calibration verification standards (CCVs) met the criteria for frequency of analysis, the minimum response factor, the retention time, the chromatographic resolution, the relative percent difference (RPD) and the percent difference (%D) criteria with the following exceptions (The compounds listed below exceeded the %D criteria):

Date of Analysis	Fraction	Compound	Associated Samples	Qualifier Detect/Non-Detect
12/23/96	VOA	dibromochloromethane, bromoform	JM166, JM167, JM168, JM170	J/None
12/30/96	BNA	2,4-dinitrophenol 4-nitroaniline 3,3'-dichlorobenzidine	All samples	J/UJ J/None J/None

2,4-Dinitrophenol, 4-nitroaniline and 3,3'-dichlorobenzidine were already qualified on the basis of initial calibration criteria. No further qualification are required.

Compound Quantitation and Detection Limits

All of the samples were analyzed at the contract required quantitation limits (CRQLs). All of the reported results were within the calibration linear range and were adjusted for sample amount and percent moisture. Target compounds that were detected at concentrations less than the quantitation limits were qualified as estimated, "J". The detected pesticide and PCBs were quantitated from both columns. The lower pesticide/PCB value were reported. Pesticide/PCB concentrations with %Ds >25% were qualified as estimated, "J".

Blanks

The frequency of analysis of laboratory blanks was met. Background levels for all target compounds in the method blanks were below the CRQLs. Acetone and methylene chloride were detected in the holding blank VHBLKP7. The acetone and methylene chloride detected in the associated samples at concentrations less than ten times the value in the blank were qualified as non-detects, "U". Methoxychlor and endosulfan sulfate were detected in the pest/PCB blank PBLKPR. The detected methoxychlor and endosulfan sulfate in the samples at concentrations less than five time the concentrations in the blank were qualified as non-detects, "U".

All of the standards, blanks, samples and QC samples were analyzed in accordance with the SOW-specified analytical sequence for all three types of organic analyses.

All of the VOA, ABN and pest/PCB surrogate recoveries met the applicable QC criteria with the following exceptions:

Due to possible low bias, the associated pesticide and PCB results for sample JM167 were qualified as estimated, "J/UJ".

Sample JM174 was analyzed for VOA, BNAs, pest/PCB MS/MSD. The frequency of analysis of MS/MSD was met for all analyses. All of the applicable QC criteria for MS and MSD analyses were met with the exception of the following:

Compound	MS Recovery (%)	MSD Recovery (%)	QC Limits (%)
2,4-dinitrotoluene	102	92	28-89
Pentachlorophenol	145	148	17-109

The acceptance criteria for internal standards (IS) are ± 0.5 minutes for retention time shifts and -50% to $+100\%$ of the IS area as compared to the IS retention time and area of the continuing calibration standard. All of the GC/MS analyses met the IS area and retention time shift criteria. None of the data were qualified on this basis.

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows and met the USEPA spectral matching criteria. All of the pest/PCB detected in the samples were within the retention time windows and were detected in both columns. None of the data were qualified on the basis of compound identification.

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and the associated method blank(s) were qualified as unusable, "R". Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "JN", tentatively identified at an estimated concentration.

Laboratory Contact

The laboratory was not contacted for this review.

Overall Assessment

All of the samples were analyzed in accordance with the SOW specifications. Data results, as qualified, are acceptable and can be used for all purposes.

Holding Time Summary - Case 25253 SDG: JM166

Sample Number	Collection Date	VTSR*	Analysis Date VOA	Extraction Date	Analysis Date BNA	Analysis Date Pest/PCB
JM166	12/16/96	12/21/96	12/23/96	12/23/96	12/30/96	01/02/97
JM167	12/19/96	12/21/96	12/23/96	12/23/96	12/30/96	01/02/97
JM168	12/16/96	12/21/96	12/23/96	12/23/96	12/30/96	01/02/97
JM170	12/15/96	12/21/96	12/23/96	12/23/96	12/30/96	01/02/97
JM171	12/17/96	12/21/96	12/24/96	12/23/96	12/30/96	01/02/97
JM172	12/17/96	12/21/96	12/24/96	12/23/96	12/30/96	01/03/97
JM173	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	01/03/97
JM174	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	01/03/97
JM175	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	01/03/97
JM176	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	01/03/97
JM177	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	01/03/97
JM178	12/18/96	12/21/96	12/24/96	12/23/96	12/31/96	01/03/97
JM191	12/17/96	12/21/96	NA	12/23/96	NA	12/31/96
JM192	12/18/96	12/21/96	NA	12/23/96	NA	12/31/96
JM193	12/17/96	12/21/96	NA	12/23/96	NA	01/01/97
JM194	12/16/96	12/21/96	12/24/96	12/23/96	12/30/96	01/01/97
JM195	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	01/02/97
JM196	12/18/96	12/21/96	12/24/96	12/23/96	12/30/96	01/02/97
JM197	12/17/96	12/21/96	12/24/96	12/23/96	12/30/96	01/02/97
JM198	12/17/96	12/21/96	12/24/96	12/23/96	12/30/96	01/02/97

*VTSR - Verified Time of Sample Receipt in the Laboratory

** NA - Not Analyzed

DATA QUALIFIERS

- U - The analyte was not detected at or above the reported result.
- J - The analyte was positively identified. The associated numerical result is an estimate.
- R - The data are unusable for all purposes.
- N - There is evidence the analyte is present in this sample.
- JN - There is evidence that the analyte is present. The associated numerical result is an estimate.
- UJ - The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM166

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835257

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035257C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/Kg

Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
103-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM166

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835257

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035257C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.87	28	JB
2.	LABORATORY ARTIFACT	16.56	7	J
3.	LABORATORY ARTIFACT	19.24	12	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment
ecology and environment

OLM03.0

A

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM167

Lab Name: COMPUCEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835266

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035266C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM167

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835266

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035266C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.82	13	JB
2.	LABORATORY ARTIFACT	16.52	11	J
3.	LABORATORY ARTIFACT	19.21	34	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
F.3

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM168

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835267

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035267C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB524

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/Kg

Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	X 4
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM168

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835267

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035267C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	13	JB
2.	LABORATORY ARTIFACT	19.19	12	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM170

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835268

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035268C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM170

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835268

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035268C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.87	15	JD
2.	LABORATORY ARTIFACT	19.24	11	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM171

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835269

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035269C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 11

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	11	U	
74-83-9-----	Bromomethane	11	U	
75-01-4-----	Vinyl Chloride	11	U	
75-00-3-----	Chloroethane	11	U	
75-09-2-----	Methylene Chloride	11	X	4
67-64-1-----	Acetone	11	X	4
75-15-0-----	Carbon Disulfide	11	U	
75-35-4-----	1,1-Dichloroethene	11	U	
75-34-3-----	1,1-Dichloroethane	11	U	
540-59-0-----	1,2-Dichloroethene (total)	11	U	
67-66-3-----	Chloroform	11	U	
107-06-2-----	1,2-Dichloroethane	11	U	
78-93-3-----	2-Butanone	11	U	
71-55-6-----	1,1,1-Trichloroethane	11	U	
56-23-5-----	Carbon Tetrachloride	11	U	
75-27-4-----	Bromodichloromethane	11	U	
78-87-5-----	1,2-Dichloropropane	11	U	
10061-01-5-----	cis-1,3-Dichloropropene	11	U	
79-01-6-----	Trichloroethene	11	U	
124-48-1-----	Dibromochloromethane	11	U	
79-00-5-----	1,1,2-Trichloroethane	11	U	
71-43-2-----	Benzene	11	U	
10061-02-6-----	trans-1,3-Dichloropropene	11	U	
75-25-2-----	Bromoform	11	U	
108-10-1-----	4-Methyl-2-Pentanone	11	U	
591-78-6-----	2-Hexanone	11	U	
127-18-4-----	Tetrachloroethene	11	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U	
108-88-3-----	Toluene	11	U	
108-90-7-----	Chlorobenzene	11	U	
100-41-4-----	Ethylbenzene	11	U	
100-42-5-----	Styrene	11	U	
1330-20-7-----	Xylene (Total)	11	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM171

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835269

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035269C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 11

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	17	JB R
2.	LABORATORY ARTIFACT	19.20	11	J R
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment
ecology and environment

OLM03.0
93

Organic Name Report & Chain of Custody Record (For Organic CLP Analysis)

| (If applicable)

25253

1. Project Code TFC-6804		Account Code 977101PAXI 022LA00		2. Region No. 10		Sampling Co. E+E		4. Date Shipped 12/20/96		Carrier Air Born		6. Preservative (Enter in Column D)		7. Sample Description (Enter in Column A)	
Regional Information				Sampler (Name) Mike Martin				Airbill Number 666-705524 4208990170				1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved		1. Surface Water 2. Ground Water 3. Leachate 4. Filtrate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)	
Non-Superfund Program				Sampler Signature [Signature]				5. Ship To Attn: Richard Bloom 4600 Silicon Drive Rt. 5, Triangle Park, NC 27709							
Site Name Nick		Site Name		3. Type of Activity				5. Ship To				1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved		1. Surface Water 2. Ground Water 3. Leachate 4. Filtrate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)	
City, State		Site Spill ID		Remedial Removal Load Pro. RIFS CLEM SF <input type="checkbox"/> Remedial RD <input type="checkbox"/> REMA <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>				ATTN: 27709							

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./ Grab.	D Preservative from Box 6	E RAS Analysis				F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/ Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform. Eval. -- = Not a QC Sample
					VOA	BNA	Pest/ PCB	High only ARO/ TOX						
JM188						1	1		96514703	DW4	12/17/96 0830	mm		
JM189						1	1		96514704	DW5	12/19/96 0845	1		
JM182						1	1		96514747	GLWRNS	12/19/96 1430	1		
Shipment for Case complete? (Y/N)		Page 1 of ____		Sample used for a spike and/or duplicate					Additional Sampler Signatures			Chain of Custody Seal Number		

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
<i>[Signature]</i>	12/29/86				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)

☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0344333



United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No.
(if applicable)

Case No.

25253

1. Project Code TEC-1601		Account Code PTTIO PFAA 1022-LA00		2. Region No. 10		Sampling Co. E-E		4. Date Shipped 12/20/96		Carrier Airborne		6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaOH 4. H2SO4 5. K2CR2O7 6. Ice only 7. Other (Specify) N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)													
Regional Information				Sampler (Name) Mike MARTIN				Airbill Number 666705513																			
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To SOUTHWEST LABS 1700 WEST ALBANY, SUITE C BROKEN ARROW, OK 74012 ATTN: JASON RUCKENBAUM																			
Site Name Nike Missile				3. Type of Activity SF <input type="checkbox"/> Lead <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>																							
City, State		Site Spill ID		CLP Sample Numbers (from labels)		A Enter # from Box 7		B Conc. Low Med High		C Sample Type: Comp./Grab		D Preservative from Box 6		E - RAS Analysis Metals: Total Dissolved Cyanide Low Conc. only: Nitrate Nitrite Fluoride High only: pH Conductivity		F Regional Specific Tracking Number or Tag Numbers		G Station Location Number		H Mo/Day/Year/Time Sample Collection		I Sampler Initials		J Corresp. CLP Org. Samp. No.		K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform. Eval. - = Not a QC Sample	
MTM873		S		L		G		P		1						96S14716		GP-5B-2		12/17/96 1010		mm					
874																96S14717		GP-5B-7		12/17/96 1020							
875																96S14718		GP-6B-2		12/17/96 1150							
876																96S14719		GP-6B-7		12/17/96 1200							
877																96S14720		GP-7B-2		12/17/96 1245							
878																96S14721		GP-7B-7		12/17/96 1255							
879																96S14722		GP-8B-2		12/17/96 1336							
880																96S14723		GP-8B-7		12/17/96 1355							
889																96S14732		GP-12B-7		12/18/96 0920							
888																96S14731		GP-12B-2		12/18/96 0910							
Shipment for Case complete? (Y/N)				Page 1 of 2				Sample used for a spike and/or duplicate				Additional Sampler Signatures				Chain of Custody Seal Number											

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 12/20/96 1600	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

CHAIN OF CUSTODY RECORD

1 351542



Contract Laboratory Program Sample Management Office
PO Box 618 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Toxic Report
& Chain of Custody Record
(For Inorganic CLP Analysis)

SAS No.
(if applicable)

Case No.

25253

1. Project Code TEC-680A		Account Code 97710 PFAX 022-400		2. Region No. 10		Sampling Co. E-E		4. Date Shipped/Carrier 12/20/96 Celberty		6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaOH 4. H2SO4 5. K2Cr2O7 6. Ice only 7. Other (Specify) N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinse 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)											
Regional Information				Sampler (Name) MIKE MARTIN				Airbill Number 666705513															
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To SOUTHWEST LABS 1700 WEST ALBANY, SUITE C BROKEN ARROW, OK 74012 ATTN: JASON RUCKMAN															
Site Name Mike Missel				3. Type of Activity SF <input type="checkbox"/> Lead <input type="checkbox"/> Pre-Remedial <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RA <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> O&M <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> NPLD <input type="checkbox"/> OIL <input type="checkbox"/> UST <input type="checkbox"/>																			
City, State		Site Spill ID																					
CLP Sample Numbers (from labels)		A Enter # from Box 7		B Conc. Low Med High		C Sample Type: Comp/Grab		D Preservative from Box 6		E - RAS Analysis Metals: Total Dissolved Cyanide Low Conc. only: Nitrate Nitrite Fluoride High only: pH Conductivity		F Regional Specific Tracking Number or Tag Numbers		G Station Location Number		H Mo/Day/Year/Time Sample Collection		I Sampler Initials		J Corresp. CLP Org. Samp. No.		K Enter Appropriate Qualifier for Designated Field QC B - Blank S - Spike D - Duplicate PE - Perform. Eval. -- Not a QC Sample	
MJM858		2		L		G		2		1				96514700		DW 1		12/16/96 1330		m		JM185	
MJM859		2		L		G		2		1				96514701		DW 2		12/16/96 1358		m		JM186	
MJM860		2		L		G		2		1				96514702		DW 3		12/16/96 1435		m		JM187	
MJM861		2		L		G		2		1				96514703		DW 4		12/17/96 0910				JM188	
MJM862		2		L		G		2		1				96514704		DW 5		12/17/96 0940				JM189	
MJM863		2		L		G		2		2				96514705		DW 6		12/17/96 1400				JM190	
MJM887		2		L		G		2		1				96514730		DW 6D		12/17/96 1400					
MJM864		5		L		G		6		1				96514707		GP-1-4		12/16/96 1050					
MJM865		5		L		G		6		1				96514708		GP-1-7		12/16/96 1110					
MJM869		5		L		G		6		1				96514712		GP-3-7		12/16/96 1530					
Shipment for Case complete? (Y/N)				Page 1 of				Sample used for a spike and/or duplicate MJM863				Additional Sampler Signatures				Chain of Custody Seal Number							

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 12/20/96 1800	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

PA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:

Green - Region Copy Pink - SMO Copy White - Lab Copy for return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Regional Information		Sampler (Name) <i>M. G. M. A. P. W.</i>		Airbill Number <i>666705513</i>		6. Preservative (Enter in Column D) 1. HCl 2. HNO ₃ 3. NaOH 4. H ₂ SO ₄ 5. K ₂ Cr ₂ O ₇ 6. Ice only 7. Other (Specify) N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinse 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)	
Non-Superfund Program		Sampler Signature <i>[Signature]</i>		5. Ship To SOUTHWEST LABS 1700 WEST ALBANY, SUITE C BROKEN ARROW, OK 74012 ATTN: JASON RUCKMAN					
Site Name <i>Nike Missile</i>		3. Type of Activity Remedial: <input type="checkbox"/> Lead <input type="checkbox"/> Pre-Remedial <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> Removal: <input type="checkbox"/> SF <input type="checkbox"/> PA <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> <input type="checkbox"/> PRP <input type="checkbox"/> SS <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>							
City, State		Site Spill ID							

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E - RAS Analysis								F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC □ - Blank S - Spike D - Duplicate PE - Performed Eval. -- - Not a QC Sample
					Metals		Low Conc. only			High only								
					Total	Dissolved	Cyanide	Nitrate/Nitrite	Fluoride	pH	Conductivity							
<i>MTM 871</i>	<i>5</i>	<i>L</i>	<i>G</i>	<i>6</i>	<i>1</i>							<i>96514714</i>	<i>GP-4-4</i>	<i>12/14/96 1600</i>	<i>MM</i>			
<i>MTM 868</i>	<i>5</i>	<i>L</i>	<i>G</i>	<i>6</i>	<i>1</i>							<i>96514711</i>	<i>GP-3-2</i>	<i>12/14/96 1510</i>				
<i>MTM 872</i>	<i>5</i>	<i>L</i>	<i>G</i>	<i>6</i>	<i>1</i>							<i>96514715</i>	<i>GP-4-7</i>	<i>12/14/96 1615</i>				
<i>MTM 886</i>	<i>5</i>	<i>L</i>	<i>G</i>	<i>6</i>	<i>1</i>							<i>96514742</i>	<i>GP-17-9</i>	<i>12/18/96 1340</i>				
<i>MTM 892</i>	<i>5</i>	<i>L</i>	<i>G</i>	<i>6</i>	<i>1</i>							<i>96514744</i>	<i>GP-18-8</i>	<i>12/18/96 1435</i>				
<i>MTM 893</i>	<i>5</i>	<i>L</i>	<i>G</i>	<i>6</i>	<i>1</i>							<i>96514743</i>	<i>GP-18-4</i>	<i>12/18/96 1405</i>				
<i>MTM 894</i>	<i>2</i>	<i>L</i>	<i>G</i>	<i>2</i>	<i>2</i>							<i>96514745</i>	<i>GU-1</i>	<i>12/19/96 0930</i>		<i>MSD</i>		
<i>MTM 895</i>	<i>2</i>	<i>L</i>	<i>G</i>	<i>2</i>	<i>1</i>							<i>96514746</i>	<i>GU-2</i>	<i>12/19/96 1230</i>				
<i>MTM 896</i>	<i>2</i>	<i>L</i>	<i>G</i>	<i>2</i>	<i>1</i>							<i>96514747</i>	<i>GU-RNS</i>	<i>12/19/96 1400</i>				

Shipment for Case complete? (Y/N)	Page 1 of _____	Sample used for a spike and/or duplicate	Additional Sampler Signatures	Chain of Custody Seal Number
-----------------------------------	-----------------	--	-------------------------------	------------------------------

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time <i>12/20/96 1400</i>	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used
 DISTRIBUTION:
 Green - Region Copy Pink - SMO Copy White - Lab Copy for return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature) ☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

1 351544

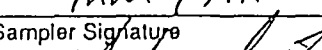
Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No. (if applicable)	
----------------------------	--

Case No.

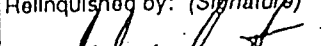
25278

1. Project Code TEC-680A		Account Code 97710PFAA 10ZZLACC		2. Region No. 10		Sampling Co. E+E		4. Date Shipped 1-15-97		Carrier Air Ex		6. Preservation (Enter in Column D) 1. HCl 2. HNO3 3. NaOH 4. H2SO4 5. K2Cr2O7 6. Ice only 7. Other (Specify) N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Filtrate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)																																																	
Regional Information				Sampler (Name) MM CAN				Airbill Number 4208990376																																																							
Non-Superfund Program				Sampler Signature 				5. Ship To Southwest Labs of OK 1700 W. Albany, Suite C Broken Arrow, OK 74012 ATTN: Jason Ruckman																																																							
Site Name Nike				3. Type of Activity																																																											
City, State				Site Spill ID																																																											
				<table border="1"> <thead> <tr> <th colspan="2">Lead</th> <th colspan="2">Pre-Remedial</th> <th colspan="2">RIFS</th> <th colspan="2">Removal</th> </tr> <tr> <th>SF</th> <th>PRP</th> <th>PA</th> <th>SSI</th> <th>RD</th> <th>RAM</th> <th>CLEM</th> <th>REMA</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>				Lead		Pre-Remedial		RIFS		Removal		SF	PRP	PA	SSI	RD	RAM	CLEM	REMA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
Lead		Pre-Remedial		RIFS		Removal																																																									
SF	PRP	PA	SSI	RD	RAM	CLEM	REMA																																																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																								

[illegible]

Shipment for Case complete? (Y/N)	Page 1 of <u>1</u>	Sample used for a spike and/or duplicate <u>M-1M 958</u>	Additional Sampler Signatures	Chain of Custody Seal Number <u>102085</u>
-----------------------------------	--------------------	---	-------------------------------	---

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) 	Date / Time 1-15-92 1300	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-1 (Rev. 5-91) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:

DISTRIBUTION:
Green - Region Copy Pink - SMO Copy White - Lab Copy for return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM190

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835223

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

319-84-5-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
76-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

FORM I PEST

recycled paper
recycled paper

[Signature]
ecology and environment
ecology and environment

OLM03.0

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM189

Lab Name: COMPU-EM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835222

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
76-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM188

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835221

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
76-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

FORM I PEST

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM187

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835220

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.

COMPOUND

Q

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-3-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
76-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-3-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11095-82-5-----	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM186

Lab Name: COMPU-CHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835219

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
75-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

FORM I PEST

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
100

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM185

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835218

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
75-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-3-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM182

Lab Name: COMPU-EM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180
Matrix: (soil/water) WATER Lab Sample ID: 835215
Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____
% Moisture: _____ decanted: (Y/N) _____ Date Received: 12/21/96
Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/23/96
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

0.10 0.0030 JP 4

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM181

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835214

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____ Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
76-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM180

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835205

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 12/23/96

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	0.050	U
319-85-7-----	beta-BHC	0.050	U
319-86-8-----	delta-BHC	0.050	U
58-89-9-----	gamma-BHC (Lindane)	0.050	U
76-44-8-----	Heptachlor	0.050	U
309-00-2-----	Aldrin	0.050	U
1024-57-3-----	Heptachlor epoxide	0.050	U
959-98-8-----	Endosulfan I	0.050	U
60-57-1-----	Dieldrin	0.10	U
72-55-9-----	4,4'-DDE	0.10	U
72-20-8-----	Endrin	0.10	U
33213-65-9-----	Endosulfan II	0.10	U
72-54-8-----	4,4'-DDD	0.10	U
1031-07-8-----	Endosulfan sulfate	0.10	U
50-29-3-----	4,4'-DDT	0.10	U
72-43-5-----	Methoxychlor	0.50	U
53494-70-5-----	Endrin ketone	0.10	U
7421-93-4-----	Endrin aldehyde	0.10	U
5103-71-9-----	alpha-Chlordane	0.050	U
5103-74-2-----	gamma-Chlordane	0.050	U
8001-35-2-----	Toxaphene	5.0	U
12674-11-2-----	Aroclor-1016	1.0	U
11104-28-2-----	Aroclor-1221	2.0	U
11141-16-5-----	Aroclor-1232	1.0	U
53469-21-9-----	Aroclor-1242	1.0	U
12672-29-6-----	Aroclor-1248	1.0	U
11097-69-1-----	Aroclor-1254	1.0	U
11096-82-5-----	Aroclor-1260	1.0	U

FORM I PEST

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

468

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM190

Lab Name: COMPU-EM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835223

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035223B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/24/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-93-0	CYCLOHEXANOL	5.36	10	NJ
2.	UNKNOWN AMIDE	19.88	2	JN
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM190

Lab Name: COMPU-CHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835223

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035223B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/24/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM190

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835223

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035223B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/24/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
105-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM189

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835222

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035222B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-93-0	CYCLOHEXANOL	5.35	10	NJ
2.	UNKNOWN CARBOXYLIC ACID	15.16	3	JN
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM189

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835222

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035222B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO. COMPOUND Q

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM189

Lab Name: COMPU-CHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835222

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035222B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
93-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-3-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM188

Lab Name: COMPU-EM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835221

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035221B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-93-0	CYCLOHEXANOL	5.36	8	NJ
2.	UNKNOWN CARBOXYLIC ACID	15.16	2	JN
3.	UNKNOWN AMIDE	19.88	4	J
4.	UNKNOWN ALCOHOL	20.03	5	J✓
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM188

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835221

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035221B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM188

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180
Matrix: (soil/water) WATER Lab Sample ID: 835221
Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035221B60
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO. COMPOUND Q

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
93-95-3-----	Nitrobenzene	10	U
73-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy)methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM187

Lab Name: COMPU-HEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835220

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035220B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment
OIM03.0
315

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM187

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835220

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035220B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
85-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM187

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835220

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035220B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy)methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-3-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

FORM I SV-1

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
913

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM185

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835219

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035219B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:

Number TICs found: 1

(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 108-93-0	CYCLOHEXANOL	5.36	10	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM185

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835219

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035219B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
200

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM186

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835219

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035219B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM185

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835218

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035218360

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 108-93-0	CYCLOHEXANOL	5.36	9	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.:

JM185

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835218

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035218B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	1	J
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM185

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835218

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035218B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM182

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835215

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035215B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 108-93-0	CYCLOHEXANOL	5.36	5	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM182

Lab Name: COMPU-CHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835215

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035215B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
37-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
65-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	J
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

272

13
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM182

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835215

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035215B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-3-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM181

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835214

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035214B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/24/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-93-0	CYCLOHEXANOL	5.36	3	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM181

Lab Name: COMPU-EM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835214

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035214B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/24/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM181

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835214

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035214B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: decanted: (Y/N) Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/24/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10 U	
111-44-4	bis(2-Chloroethyl) ether	10 U	
95-57-8	2-Chlorophenol	10 U	
541-73-1	1,3-Dichlorobenzene	10 U	
106-46-7	1,4-Dichlorobenzene	10 U	
95-50-1	1,2-Dichlorobenzene	10 U	
95-48-7	2-Methylphenol	10 U	
108-60-1	2,2'-oxybis(1-Chloropropane)	10 U	
106-44-5	4-Methylphenol	10 U	
621-64-7	N-Nitroso-di-n-propylamine	10 U	
67-72-1	Hexachloroethane	10 U	
98-95-3	Nitrobenzene	10 U	
78-59-1	Isophorone	10 U	
88-75-5	2-Nitrophenol	10 U	
105-67-9	2,4-Dimethylphenol	10 U	
111-91-1	bis(2-Chloroethoxy) methane	10 U	
120-83-2	2,4-Dichlorophenol	10 U	
120-82-1	1,2,4-Trichlorobenzene	10 U	
91-20-3	Naphthalene	10 U	
106-47-8	4-Chloroaniline	10 U	
87-68-3	Hexachlorobutadiene	10 U	
59-50-7	4-Chloro-3-methylphenol	10 U	
91-57-6	2-Methylnaphthalene	10 U	
77-47-4	Hexachlorocyclopentadiene	10 U	
88-06-2	2,4,6-Trichlorophenol	10 U	
95-95-4	2,4,5-Trichlorophenol	25 U	
91-58-7	2-Chloronaphthalene	10 U	
88-74-4	2-Nitroaniline	25 U	
131-11-3	Dimethylphthalate	10 U	
208-96-8	Acenaphthylene	10 U	
606-20-2	2,6-Dinitrotoluene	10 U	
99-09-2	3-Nitroaniline	25 U	
83-32-9	Acenaphthene	10 U	

FORM I SV-1

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
259

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM180

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER Lab Sample ID: 835205

Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035205B60

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 4

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-93-0	CYCLOHEXANOL	5.36	5	NJ
2. 25013-16-5	BUTYLATED HYDROXYANISOLE	11.43	7	NJ
3.	UNKNOWN	12.35	2	JN
4.	UNKNOWN	13.13	2	JN
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM180

Lab Name: COMPUchem ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835205

Sample wt/vol: 1000 (g/mL) mL

Lab File ID: GH035205B60

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 12/23/96

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 12/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
97-86-5-----	Pentachlorophenol	25	U
95-01-3-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
86-74-8-----	Carbazole	10	U
84-74-2-----	Di-n-butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	2	J ✓
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	10	U
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-3-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenzo(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0
217

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM180

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180
Matrix: (soil/water) WATER Lab Sample ID: 835205
Sample wt/vol: 1000 (g/mL) mL Lab File ID: GH035205B60
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 12/23/96
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/25/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
506-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM225

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835224

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035224C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM225

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835224

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035224C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	2	J
67-64-1-----	Acetone	10	UJ
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	27	
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	UJ
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	1	J
78-87-5-----	1,2-Dichloropropane	10	U
10051-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10051-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	UJ
591-78-6-----	2-Hexanone	10	UJ
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM190

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835223

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035223C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB524 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM190

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835223

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035223C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	UJ
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	UJ
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	UJ
591-78-6-----	2-Hexanone	10	UJ
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM189

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835222

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035222C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB524 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper



ecology and environment
ecology and environment
OLM03.0
105

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM189

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835222

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035222C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB524

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	UJ
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	UJ
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	UJ
591-78-6-----	2-Hexanone	10	UJ
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM188

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835221

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035221A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM188

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835221

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035221A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB524 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	UJ
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	UJ
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-5-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	UJ
591-78-6-----	2-Hexanone	10	UJ
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM187

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835220

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035220A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM187

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835220

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035220A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec.

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.

COMPOUND

Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
106-10-1	4-Methyl-2-Pentanone	10	UJ
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
106-88-3	Toluene	10	U
106-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM186

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835219

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035219A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

OLM03.0

ecology and environment
ecology and environment

86

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM186

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835219

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035219A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec.

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
---------	----------	--	---

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
57-64-1-----	Acetone	10	UJ
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	UJ
71-55-3-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-37-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	UJ
591-78-6-----	2-Hexanone	10	UJ
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

FORM I VOA

OLM03.0

13
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM185

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835218

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035218A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT.	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

41
ecology and environment
ecology and environment 78
OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM185

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835218

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CR035218A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB524

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10051-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10051-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	UJ
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM184

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835217

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: C3R35217C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB524

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

OLM03.0
ecology and environment
ecology and environment 71

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM184

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835217

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: C3R35217C57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/26/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	1	J
67-64-1-----	Acetone	17	J
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U J
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-5-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
103-10-1-----	4-Methyl-2-Pentanone	10	U J
591-78-6-----	2-Hexanone	10	U J
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM183

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835216

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035216A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

63

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM183

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835216

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035216A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	10	UJ
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	UJ
591-78-6	2-Hexanone	10	UJ
127-13-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM181

Lab Name: COMPUCHEM ENV. CORP.

Contract: 58D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835214

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035214A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB524 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q/J
=====	=====	=====	=====	=====
1.	UNKNOWN	20.16	5	JJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM181

Lab Name: COMPU-CHM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835214

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035214A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec.

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	21	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
71-55-5	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	UJ
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM180

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835205

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035205A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper
recycled paper

OLM03.0
ecology and environment
ecology and environment 45

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM180

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM180

Matrix: (soil/water) WATER

Lab Sample ID: 835205

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: CN035205A57

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. _____

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	1	J
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	3	J

DATA QUALIFIERS

- U - The analyte was not detected at or above the reported result.
- J - The analyte was positively identified. The associated numerical result is an estimate.
- R - The data are unusable for all purposes.
- N - There is evidence the analyte is present in this sample.
- JN - There is evidence that the analyte is present. The associated numerical result is an estimate.
- UJ - The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

Holding Time Summary - Case 25253 SDG: JM180

Sample Number	Collection Date	VTSR*	Analysis Date VOA	Extraction Date	Analysis Date BNA	Analysis Date Pest/PCB
JM180	12/19/96	12/21/96	12/24/96	12/23/96	12/24/96	12/31/96
JM181	12/19/96	12/21/96	12/24/96	12/23/96	12/25/96	12/31/96
JM182	12/19/96	12/21/96	NA	12/23/96	12/25/96	12/31/96
JM183	12/18/96	12/21/96	12/24/96	NA	NA	NA
JM184	12/18/96	12/21/96	12/26/96	NA	NA	NA
JM185	12/16/96	12/21/96	12/24/96	12/23/96	12/25/96	12/31/96
JM186	12/16/96	12/21/96	12/24/96	12/23/96	12/25/96	12/31/96
JM187	12/16/96	12/21/96	12/24/96	12/23/96	12/25/96	12/31/96
JM188	12/17/96	12/21/96	12/24/96	12/23/96	12/25/96	12/31/96
JM189	12/17/96	12/21/96	12/26/96	12/23/96	12/25/96	12/31/96
JM190	12/17/96	12/21/96	12/26/96	12/23/96	12/25/96	12/31/96
JM225	12/20/96	12/21/96	12/26/96	NA	NA	NA

*VTSR - Verified Time of Sample Receipt in the Laboratory

** NA - Not Analyzed

frequency of analysis of MS/MSD was met for all analyses. All of the applicable QC criteria for MS and MSD analyses were met. None of the data were qualified on this basis.

Internal Standards - Acceptable

The acceptance criteria for internal standards (IS) are ± 0.5 minutes for retention time shifts and -50% to +100% of the IS area as compared to the IS retention time and area of the continuing calibration standard. All of the GC/MS analyses met the IS area and retention time shift criteria. None of the data were qualified on this basis.

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows and met the USEPA spectral matching criteria. The 4,4'-DDT detected in sample JM182 had a %D (833%) that grossly exceeded the criteria of 25%. In addition to this, the amount detected was very much below the quantitation limits. Based on the reviewer's professional judgment, the 4,4'-DDT in this sample was reported as a non-detect, "U".

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and the associated method blank(s) were qualified as unusable, "R". Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "JN", tentatively identified at an estimated concentration.

Laboratory Contact

The laboratory was not contacted for this review.

Overall Assessment

All of the samples were analyzed in accordance with the SOW specifications. Data results, as qualified, are acceptable and can be used for all purposes.

Date of Analysis	Fraction	Compound	Associated Samples	Qualifier Detect/Non-Detect
12/24/96	VOA	acetone, 2-butanone, 4-methyl-2-pentanone, 2-hexanone	JM180, JM181, JM185, JM186, JM187, JM188	J/UJ
12/25/96	VOA	acetone, 2-butanone, 4-methyl-2-pentanone, 2-hexanone	JM184, JM189, JM190, JM225	J/UJ

Compound Quantitation and Detection Limits - Acceptable

All of the samples were analyzed at the contract required quantitation limits (CRQLs). All of the reported results were within the calibration linear range and were adjusted for sample amount and percent moisture.

Blanks

The frequency of analysis of laboratory blanks was met. Background levels for all target compounds in the method blanks were below the CRQLs. However, trichloroethene was detected at 1 ppb in the instrument blank VIBLKLD. The trichloroethene detected in the samples analyzed after this blank at concentrations less than five times the value in the blank were qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples and QC samples were analyzed in accordance with the SOW-specified analytical sequence for all three types of organic analyses.

System Monitoring Compounds (SMC)/Surrogates

All of the VOA, ABN and pest/PCB surrogate recoveries met the applicable QC criteria with the following exceptions:

JM180 - tetrachloro-m-xylene (TCX) - 316% (RTX-1701)

The TCX recovery for sample JM180 [calculated off the DB608 column] was 110%. The high percentage recovery calculated off the RTX-1701 column was due to interferences. Therefore, none of the associated data were qualified on this basis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) - Acceptable

Sample JM190 was analyzed for VOA, BNAs, pest/PCB MS/MSD. The

Holding Time - Acceptable

The soil samples were preserved with ice prior to shipment. All of the samples met the method and technical (40 CFR 136 water criteria) required holding times for all analyses. The Holding Times Summary listing the pertinent collection, extraction and analysis dates is attached at the end of this validation report.

Instrument Performance - Acceptable

A total of one GC and two GC/MS systems were used in all of the analyses (1 GC/MS for VOA, 1 GC/MS for BNAs and 1 GC/ECDs for pest/PCBs). All of the systems met the SOW specified technical acceptance criteria prior to sample analyses i.e, tuning and GC/MS performance checks, resolution checks, retention time, response factors and calibrations. The systems remained stable throughout the course of analyses. Instrument blanks were all clean and there were no indications of carry-over.

Initial Calibrations

Three initial calibrations performed for VOAs, ABNs and pest/PCB analyses were evaluated. All of the initial calibrations performed met the SOW technical acceptance criteria with the exception of the following:

Date of Analysis	Fraction	Compound	%RSD	Associated Samples	Qualifier Detects/Non-Detects
12/17/96	VOA	acetone	32.4	All samples	J/None
		2-butanone	35.8	All Samples	J/None

Both acetone and 2-butanone initial calibration curve were linear up to 100 ppb. Since none of the acetone and 2-butanone were detected at concentrations over 100 ppb, none of the data were qualified.

Continuing Calibrations

All of the continuing calibration verification standards (CCVs) met the criteria for frequency of analysis, the minimum response factor, the retention time, the chromatographic resolution, the relative percent difference (RPD) and the percent difference (%D) criteria with the following exceptions (The compounds listed below exceeded the %D criteria):




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: OEA-095

January 14, 1997

MEMORANDUM

Subject: Data Validation Report for Full Organic Analysis
(Volatile Organics, Semi-Volatile Organics, Pesticides
and Polychlorinated Biphenyls) of Samples from the Nike
Missile Test Launch Site Case: 25253 SDG: JM180

From:  Ginna Grepo-Grove, Chemist
Quality Assurance & Data Unit, OEA

To: Mark Ader, Site Manager
Office of Environmental Cleanup

The quality assurance (QA) review of 12 water samples collected from the above referenced site has been completed. These sample were analyzed for volatile organics (VOAs), semi-volatile organics (BNAs), pesticides and polychlorinated biphenyls (Pest/PCBs) in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.1) by Compuchem Environmental Corp., Research Triangle Park, NC. The following samples were reviewed in this report:

JM180	JM181	JM182	JM183
JM184	JM185	JM186	JM187
JM188	JM189	JM190	JM225

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.1), and the USEPA CLP National Functional Guidelines for Organic Data Review (2/94).

The conclusions presented herein are based on the information provided for the review.



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue
Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: February 6, 1997

TO: Mike Martin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *MW*

SUBJ: Full Organic Data Quality Assurance Review, Former Nike Missile Site, Poulsbo, WA

REF: TDD: 96-11-0007 PAN: AK-07-01-SI-DM

The data quality assurance review of 12 water samples collected from the Former Nike Missile site in Poulsbo, Washington, has been completed. Full Organic analyses were performed by Compuchem Environmental Corporation, Research Triangle Park, NC.

The following discrepancies were noted in the original data validation report:

The narrative states that 12 water samples are included in the validation package, while the holding time section mentions soil samples. It was determined that all samples are water after verification with the project manager.

Analytical Report

Service Request: K9700286
Date Collected: 1/14/97
Date Received: 1/16/97
Date Extracted: NA
Date Analyzed: 1/27/97

Sample Name	Lab Code	MRL	Result
DW-7	K9700286-001	50	ND
DW-7-TB	K9700286-002	50	ND
Method Blank	K970127-MB	50	ND

MMW 2-7-97

Ray Thetford

Date: 2/3/77

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Ecology & Environment, Inc.
Project: Nike/TEC-600A
Sample Matrix: Water

Service Request: K9700286
Date Collected: 1/14/97
Date Received: 1/16/97
Date Extracted: 1/20/97
Date Analyzed: 1/21,22/97

Total Petroleum Hydrocarbon as Diesel
Washington DOE Method WTPH-D
Units: $\mu\text{g/L}$ (ppb)

Analyte: Diesel
Method Reporting Limit: 250

Sample Name

Lab Code

DW-7
Method Blank

K9700286-001
K970120-MB

ND U
ND

Mr 2-7-97

Approved By:

Loren E. Fortwood

Date:

1/30/97



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: February 11, 1997

TO: Mike Marin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *MW*

SUBJ: Total Petroleum Hydrocarbon Data Quality Assurance Review,
Former Nike Missile Site, Poulsbo, WA

REF: TDD: 96-11-0007 PAN: AK-07-01-SI-DM

Per the Task Monitor, a data quality assurance review of 2 water samples collected from the Former Nike Missile site in Poulsbo, Washington, was not performed. Total petroleum hydrocarbon analyses were performed by Columbia Analytical Services, Kelso, WA.

The samples were numbered: DW-7 DW-7-TB

"U" qualifiers were added by the data reviewer to indicate results below the quantitation limit.

Data Qualifiers and Definitions

U - The material was analyzed for but was not detected. The associated numerical value is the estimated sample quantitation limit.

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM896

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.38

Level (low/med): LOW

Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	52.2	B	U	P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	1.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	84.4	B		P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	1.0	U		P
7439-89-6	Iron	27.9	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	22.0	U		P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	41.0	U		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	326	B		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	1.0	U		P
7440-66-6	Zinc	8.9	B	U	P
	Cyanide				NR

8/16 1/22/97

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM895

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER Lab Sample ID: 28060.37

Level (low/med): LOW Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	467000	-		P
7440-36-0	Antimony	8.7	B	UJ	P
7440-38-2	Arsenic	63.9	-		P
7440-39-3	Barium	4130	-		P
7440-41-7	Beryllium	11.6	-		P
7440-43-9	Cadmium	1.6	B		P
7440-70-2	Calcium	156000	-		P
7440-47-3	Chromium	601	-		P
7440-48-4	Cobalt	227	-		P
7440-50-8	Copper	533	-		P
7439-89-6	Iron	310000	-		P
7439-92-1	Lead	63.6	-		P
7439-95-4	Magnesium	90700	-		P
7439-96-5	Manganese	3890	-		P
7439-97-6	Mercury	0.24	-		CV
7440-02-0	Nickel	1220	-		P
7440-09-7	Potassium	13700	-		P
7782-49-2	Selenium	7.9	-		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	13800	-		P
7440-28-0	Thallium	5.5	B	J	P
7440-62-2	Vanadium	913	-		P
7440-66-6	Zinc	646	-		P
	Cyanide		-		NR

dec 1/22/97

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

MJM894

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.36

Level (low/med): LOW

Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	179000	-		P
7440-36-0	Antimony	5.2	B	U	P
7440-38-2	Arsenic	22.9	-		P
7440-39-3	Barium	1100	-		P
7440-41-7	Beryllium	2.5	B		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	35800	-		P
7440-47-3	Chromium	172	-		P
7440-48-4	Cobalt	68.2	-		P
7440-50-8	Copper	136	-		P
7439-89-6	Iron	109000	-		P
7439-92-1	Lead	18.7	-		P
7439-95-4	Magnesium	30700	-		P
7439-95-5	Manganese	2380	-		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	402	-		P
7440-09-7	Potassium	6260	-		P
7782-49-2	Selenium	5.6	-		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	10400	-		P
7440-28-0	Thallium	8.0	B		P
7440-62-2	Vanadium	294	-		P
7440-66-6	Zinc	173	-		P
	Cyanide		-		NR

APC 11/22/97

Color Before: BROWN

Clarity Before: CLOUDY

Texture:

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM887

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.29

Level (low/med): LOW

Date Received: 12/21/96

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	26.2	B	U	P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	2.3	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	8970			P
7440-47-3	Chromium	3.9	B		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	1.0	U		P
7439-89-6	Iron	10.0	U		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	9860			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	841	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	4630	B		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	6.0	B		P
7440-66-6	Zinc	7.8	B	U	P
	Cyanide				NR

d/c 1/22/97

Color Before: COLORLESS

Clarity Before: CLEAR

Texture: _____

Color After: COLORLESS

Clarity After: CLEAR

Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM863

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.06

Level (low/med): LOW

Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	54.4	B	U	P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	2.4	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	8940			P
7440-47-3	Chromium	4.0	B		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	1.0	U		P
7439-89-6	Iron	19.2	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	9840			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	828	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	4490	B		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	6.0	B		P
7440-66-6	Zinc	7.4	B	U	P
	Cyanide				NR

dmc 1/22/97

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM862

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.05

Level (low/med): LOW

Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25.5	B	U	P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	5.7	B		P
7440-39-3	Barium	3.3	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	12400			P
7440-47-3	Chromium	2.0	B		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	11.7	B		P
7439-89-6	Iron	14.8	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	11100			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	1310	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	5170			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	7.2	B		P
7440-66-6	Zinc	70.4			P
	Cyanide				NR

APC 1/22/97

Color Before: COLORLESS

Clarity Before: CLEAR

Texture: _____

Color After: COLORLESS

Clarity After: CLEAR

Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM861

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.04

Level (low/med): LOW

Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	24.1	B	U	P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	2.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	10200			P
7440-47-3	Chromium	2.6	B		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	1.0	U		P
7439-89-6	Iron	17.8	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	10100			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	1080	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	4650	B		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	6.0	B	U	P
	Cyanide				NR

JMC 1/22/97

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM850

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.03

Level (low/med): LOW

Date Received: 12/21/96

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	31.0	B	U	P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	5.0	B		P
7440-39-3	Barium	10.3	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	18600			P
7440-47-3	Chromium	1.3	B		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	1.3	B		P
7439-89-6	Iron	14.8	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	7780			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	1140	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	6340			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	5.9	B		P
7440-66-6	Zinc	93.4			P
	Cyanide				NR

APC 1/22/97

Color Before: COLORLESS

Clarity Before: CLEAR

Texture: _____

Color After: COLORLESS

Clarity After: CLEAR

Artifacts: _____

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM859

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER

Lab Sample ID: 28060.02

Level (low/med): LOW

Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25.4	B	U	P
7440-36-0	Antimony	3.0	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	2.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	10900			P
7440-47-3	Chromium	5.2	B		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	92.5	B		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	10100			P
7439-96-5	Manganese	3.0	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	943	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	5760			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	6.3	B		P
7440-66-6	Zinc	77.8			P
	Cyanide				NR

MJM 1/22/97

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM858

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25253 SAS No.: SDG No.: MJM858

Matrix (soil/water): WATER Lab Sample ID: 28060.01

Level (low/med): LOW Date Received: 12/21/96

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	34.3	B	U	P
7440-36-0	Antimony	3.5	B	U	P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	2.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	10600			P
7440-47-3	Chromium	4.1	B		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	6.0	B		P
7439-89-6	Iron	10.0	U		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	8790			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	681	B		P
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	5450			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	5.4	B		P
7440-66-6	Zinc	30.5			P
	Cyanide				NR

JEC 11/22/97

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Below are the definitions for the National Functional Guidelines for Inorganic Data Review (02/94) qualifiers used when validating/qualifying data from Inorganic analysis.

DATA QUALIFIERS

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

January 22, 1997

11.0 ICP-AES Serial Dilution - Acceptable

Sample MJM863 was analyzed by ICP-AES serial dilution to check for potential interferences. All analytes which exceeded the minimum concentration criterion (50 times the IDL) agreed within 10% RPD. No qualification was made on this basis.

12.0 Detection Limits - Acceptable

Sample results which fall below the instrument detection limit (IDL) are assigned the value of the instrument detection limit and the 'U' qualifier is attached.

13.0 Overall Assessment of the Data

This validation of the data is based on the criteria outlined in the *National Functional Guidelines for Inorganic Data Review (02/94)*. Approximately 7.4% of the data was qualified based on blank contamination and interference.

Definitions of Functional Guideline qualifiers are attached.

January 22, 1997

checked for false positives, false negatives and biased results.

Antimony in sample MJM895 was detected at 8.663 $\mu\text{g/L}$. The estimated instrument response for antimony (using Table 2 in ILM04.0, page D-26) due to interfering aluminum and iron is 2.4436 $\mu\text{g/L}$ which is slightly below the instrumental detection limit (3.0 $\mu\text{g/L}$). Antimony in most of the samples in this SDG was undetected (further indicating that the result in the sample with interferences could be a false positive or positively biased). There were a couple of hits for antimony under 6 $\mu\text{g/L}$ in samples without interfering elements. Due to the magnitude of the positive bias compared to the result (about 28.2% of the total result), antimony in sample MJM895 was qualified J, estimated. For the same reasons, thallium (result of 5.445 $\mu\text{g/L}$, estimated positive bias of 1.4 $\mu\text{g/L}$) in sample MJM895 was qualified J, estimated.

The rest of the analytes in MJM895 either did not have estimated interferences specified in Table 2 or had results where the estimated interference was less than 20% of the analytical result. No further qualification was made based on interfering analytes.

7.0 Duplicate Analysis - Acceptable

Duplicate analysis was done on sample MJM863. All results above the laboratory's instrumental detection limit were within the $\pm 20\%$ RPD criterion ($\pm \text{CRDL}$ for results < 5 times the CRDL). No data qualification was made based on ICP-AES or CVAA duplicate sample analysis.

8.0 Field Duplicate Analysis - Not Applicable

Field duplicate analysis was not indicated in the field collection documentation.

9.0 Matrix Spike Analysis - Acceptable

Matrix spike sample analyses are done to provide information about the effect of the sample matrix on digestion and measurement methods. Matrix spike recovery must be within the limits of 75 - 125% for water.

Matrix spike analysis was done on sample MJM863. All matrix spike recoveries were within the specified limits; therefore, no qualification was made on this basis.

10.0 Graphite Furnace Atomic Absorption Spec (GFAAS) QC - Not Applicable

GFAAS was not used for the analysis of these samples.

January 22, 1997

All procedural blanks met the acceptance criteria except for zinc. Zinc was detected in the procedural blank at 2.923 $\mu\text{g/L}$. Zinc results for samples MJM861, MJM863, MJM887 and MJM896 were qualified U, undetected. No further qualification was made based on the procedural blank results.

Several ICP-AES continuing calibration blanks (CCBs) resulted in detectable levels of Aluminum, Antimony and Calcium. All calcium results were greater than five times the blank contamination level. However, a number of the reported aluminum and antimony values affected by the associated CCBs were less than five times the amount found in the CCBs:

Analyte	Associated blank values in $\mu\text{g/L}$	Qualified Samples*
Aluminum	19.03 and 28.25	MJM858 MJM859 MJM860 MJM861 MJM862 MJM887 MJM863
	28.25 and 28.84	MJM896
Antimony	3.197	MJM858 MJM894 MJM895

The results for samples listed after the analytes in the table above, were qualified U, undetected.

No further qualifications were made based on ICP-AES continuing calibration blanks.

6.0 ICP-AES Interference Check Sample.

The interference check sample (ICS) is analyzed by ICP-AES to verify interelement and background correction factors. Analysis is required at the beginning and end of each sample analysis run and recoveries must be between 80% and 120%. All ICS recoveries were within the recovery criterion. No data qualification was made based on ICP-AES interference check sample analysis.

A couple of analytes not present in the ICS solution A (interfering analytes without analytes of interest) had positive results and in some cases, negative results with absolute values greater than the instrumental detection limit. This could result in biased data in samples that have similar levels of interfering analytes. Only one sample (MJM895) had interferant analytes (aluminum and antimony) similar or greater than the ICS samples. The raw data was

January 22, 1997

2.0 Sample Preparation - Acceptable

Samples were prepared for mercury analyses on 12/30/96. Samples were prepared for ICP-AES analyses on 12/27/96. No qualification was made based on sample preparation.

3.0 Calibrations/Calibration Verifications

All samples were analyzed for mercury by CVAAS on 12/30/96. Initial calibration included one blank and five standards. The curve was linear with a correlation coefficient greater than 0.995.

All samples were analyzed by ICP-AES on 12/28/96. The instrument was standardized according to the analytical method using one blank and a single calibration standard for each element.

All calibrations were performed as required and met the acceptance criteria; therefore, no qualification was made on this basis.

Calibration verification samples are required before and after sample analysis and after every 10 samples during analysis. Mercury recoveries must be within 80-120%. Other metal recoveries must be within 90-110%.

All CVAAS (mercury) and ICP-AES calibration verification samples met the recovery criteria. Calibration verification samples were analyzed after every ten samples. No qualification was made based on CVAAS calibration verification.

4.0 Laboratory Control Samples - Acceptable

Laboratory Control samples (not required for water mercury analyses) are digested and analyzed along with the samples to verify the efficiency of laboratory procedures. Acceptable limits of recovery for all metals analyses are 80-120%. All recoveries met the acceptance criteria for control samples and no qualification was made on this basis.

Contract Required Detection Limit (CRDL) standards are required to demonstrate a linear calibration curve near the CRDL. CRDL standards were run at the required frequency.

5.0 Blanks - Acceptable for Mercury

Procedural blanks were prepared with the samples to show potential contamination from the digestion or analytical procedure. If an analyte was found in the associated blank, the sample results were qualified if the analyte concentration was less than five times the analytical value in the blank.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101


IN REPLY

REFER TO: OEA-095

January 22, 1997

MEMORANDUM

SUBJECT: Nike Missile Launch Site CLP Metals Analysis, Data
Validation
Case: 25253
SDG: MJM858

FROM: 
Laura Castrilli, Chemist
Quality Assurance and Data Unit, OEA

TO: Mark Ader, Project Manager
Office of Environmental Cleanup

CC: Ray Flores, Region 6 CLP TPO, electronic memo only
Bruce Woods, Region 10 CLP TPO

The following is a validation of ICP-AES, and mercury analysis of 10 water samples from the Nike Missile Launch site. The analyses were performed following the USEPA Contract Laboratory Program Statement of Work for Inorganics Analysis Multi-media, Multi-Concentration, ILM04.0. Analyses were conducted by Southwest Laboratories of Oklahoma, Inc., Broken Arrow, Oklahoma. This validation was conducted for the following samples:

MJM858	MJM860	MJM862	MJM887	MJM895
MJM859	MJM861	MJM863	MJM894	MJM896

Data Qualifications

The following comments refer to the Southwest laboratory's performance in meeting quality control specifications outlined in the CLP Statement of Work (CLP-SOW) for Inorganic Analysis, rev. ILM04.0. The comments presented herein are based on the information provided for the review.

1.0 Timeliness - Acceptable

The suggested holding time from the date of collection for mercury in water is 28 days. The holding time for the remaining metals in water is 180 days. Collection of the water samples began on 12/16/96. Mercury analyses were completed on 12/30/96. ICP-AES analyses were completed on 12/28/96.



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue

Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: February 6, 1997

TO: Mike Martin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *MW*

SUBJ: Inorganic Data Quality Assurance Review, Former Nike Missile Site, Poulsbo, WA

REF: TDD: 96-11-0007 PAN: AK-07-01-SI-DM

The data quality assurance review of 10 water samples collected from the Former Nike Missile site in Poulsbo, Washington, has been completed. Inorganic analyses were performed by Southwest Laboratory of Oklahoma, Broken Arrow, OK.

The following change was made to the original data validation report:

The "B" flags, indicating a concentration above the instrument detection limit but below the contract required detection limit, were deleted.

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MJM958

Lab Name: SOUTHWEST LABORATORY Contract: 68-D5-0137

Lab Code: SWOK Case No.: 25276 SAS No.: SDG No.: MJM958

Matrix (soil/water): WATER

Lab Sample ID: 28188.01

Level (low/med): LOW

Date Received: 01/17/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	43.7	B		P
7440-36-0	Antimony	2.1	B		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	53.5	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.1	B		P
7440-70-2	Calcium	8230			P
7440-47-3	Chromium	5.8	B		P
7440-48-4	Cobalt	4.5	B		P
7440-50-8	Copper	133			P
7439-89-6	Iron	33800			P
7439-92-1	Lead	39.9			P
7439-95-4	Magnesium	5530			P
7439-96-5	Manganese	308			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	7.2	B		P
7440-09-7	Potassium	1330	B		P
7782-49-2	Selenium	3.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	5770			P
7440-28-0	Thallium	2.8	B		P
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	1920			P
	Cyanide			23/05/97	NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture: _____

Color After: COLORLESS

Clarity After: CLEAR

Artifacts: _____

Comments:

February 5, 1997

10.0 Graphite Furnace Atomic Absorption Spec (GFAAS) QC - Not Applicable

GFAAS was not used for the analysis of this sample.

11.0 ICP-AES Serial Dilution - Acceptable

Sample MJM958 was analyzed by ICP-AES serial dilution to check for potential interferences. All analytes which exceeded the minimum concentration criterion (50 times the IDL) agreed within 10% RPD. No qualification was made on this basis.

12.0 Detection Limits - Acceptable

Sample results which fall below the instrument detection limit (IDL) are assigned the value of the instrument detection limit and the 'U' qualifier is attached.

13.0 Overall Assessment of the Data

This validation of the data is based on the criteria outlined in the *National Functional Guidelines for Inorganic Data Review (02/94)*. None of the data was qualified (except for the 'U' qualifier for undetected analytes).

Below are the definitions for the National Functional Guidelines for Inorganic Data Review (02/94) qualifiers used when validating/qualifying data from Inorganic analysis.

DATA QUALIFIERS

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

February 5, 1997

3.0 Calibrations/Calibration Verifications - Acceptable

The sample was analyzed for mercury by CVAAS on 01/21/97. Initial calibration included one blank and five standards. The curve was linear with a correlation coefficient greater than 0.995.

The sample was analyzed by ICP-AES on 01/24/97 and a post digestion spike for zinc was analyzed by ICP-AES on 01/28/97. The instrument was standardized according to the analytical method using one blank and a single calibration standard for each element for each day of analysis.

All calibrations were performed as required and met the acceptance criteria; therefore, no qualification was made on this basis.

Calibration verification samples are required before and after sample analysis and after every 10 samples during analysis. Mercury recoveries must be within 80-120%. Other metal recoveries must be within 90-110%.

All CVAAS (mercury) and ICP-AES calibration verification samples met the recovery criteria. Calibration verification samples were analyzed after every ten samples. No qualification was made based on CVAAS calibration verification.

4.0 Laboratory Control Samples - Acceptable

Laboratory Control samples (not required for water mercury analyses) are digested and analyzed along with the samples to verify the efficiency of laboratory procedures. Acceptable limits of recovery for all metals analyses are 80-120%. All recoveries met the acceptance criteria for control samples and no qualification was made on this basis.

Contract Required Detection Limit (CRDL) standards are required to demonstrate a linear calibration curve near the CRDL. CRDL standards were run at the required frequency.

5.0 Blanks - Acceptable for Mercury

Procedural blanks were prepared with the samples to show potential contamination from the digestion or analytical procedure. If an analyte was found in the associated blank, the sample results were qualified if the analyte concentration was less than five times the analytical value in the blank.

All procedural blanks met the acceptance criteria except for Aluminum, Calcium, Iron, Sodium and Zinc. However, sample analyte levels for these compounds were greater than five times the associated blank level. Therefore, no qualification was made based on the procedural blank results.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101


IN REPLY

REFER TO: OEA-095

February 5, 1997

MEMORANDUM

SUBJECT: Nike Missile Launch Site CLP Metals Analysis, Data
Validation
Case: 25276
SDG: MJM958

FROM: 
Laura Castrilli, Chemist
Quality Assurance and Data Unit, OEA

TO: Mark Ader, Project Manager
Office of Environmental Cleanup

CC: Ray Flores, Region 6 CLP TPO, electronic memo only
Bruce Woods, Region 10 CLP TPO

The following is a validation of ICP-AES, and mercury analysis of one water sample from the Nike Missile Launch site. The analyses were performed following the USEPA Contract Laboratory Program Statement of Work for Inorganics Analysis Multi-media, Multi-Concentration, ILM04.0. Analyses were conducted by Southwest Laboratories of Oklahoma, Inc., Broken Arrow, Oklahoma. This validation was conducted for sample MJM958.

Data Qualifications

The following comments refer to the Southwest laboratory's performance in meeting quality control specifications outlined in the CLP Statement of Work (CLP-SOW) for Inorganic Analysis, rev. ILM04.0. The comments presented herein are based on the information provided for the review.

1.0 Timeliness - Acceptable

The suggested holding time from the date of collection for mercury in water is 28 days. The holding time for the remaining metals in water is 180 days. The water sample was collected on 01/14/97. Mercury analyses were completed on 01/21/97. ICP-AES analyses were completed on 01/28/97.

2.0 Sample Preparation - Acceptable

The sample was prepared for mercury analyses on 01/21/97. The sample was prepared for ICP-AES analyses on 01/20/97. No quality control was made based on sample preparation.
recycled paper ecology and environment



ecology and environment, inc.

International Specialists in the Environment

1500 First Interstate Center, 999 Third Avenue

Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9832 MEMORANDUM

DATE: February 6, 1997

TO: Mike Martin, START Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-Chemist, E & E, Seattle, WA *MW*

SUBJ: Inorganic Data Quality Assurance Review, Former Nike Missile Site,
Poulsbo, WA

REF: TDD: 96-11-0007 PAN: AK-07-01-SI-DM

The data quality assurance review of 1 water sample collected from the Former Nike Missile site in Poulsbo, Washington, has been completed. Inorganic analyses were performed by Southwest Laboratory of Oklahoma, Broken Arrow, OK.

The following change was made to the original data validation report:

The "B" flags, indicating a concentration above the instrument detection limit but below the contract required detection limit, were deleted.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM198

Lab Name: COMPU-CHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835284

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6-----	alpha-BHC	1.8	U
319-85-7-----	beta-BHC	1.8	U
319-86-8-----	delta-BHC	1.8	U
58-89-9-----	gamma-BHC (Lindane)	1.8	U
76-44-8-----	Heptachlor	1.8	U
309-00-2-----	Aldrin	1.8	U
1024-57-3-----	Heptachlor epoxide	1.8	U
959-98-8-----	Endosulfan I	1.8	U
60-57-1-----	Dieldrin	3.6	U
72-55-9-----	4,4'-DDE	3.2	J
72-20-8-----	Endrin	3.6	U
33213-65-9-----	Endosulfan II	3.6	U
72-54-8-----	4,4'-DDD	0.19	JP
1031-07-8-----	Endosulfan sulfate	3.6	U
50-29-3-----	4,4'-DDT	5.1	
72-43-5-----	Methoxychlor	0.62	JPS U
53494-70-5-----	Endrin ketone	3.6	U
7421-93-4-----	Endrin aldehyde	3.6	U
5103-71-9-----	alpha-Chlordane	1.8	U
5103-74-2-----	gamma-Chlordane	1.8	U
8001-35-2-----	Toxaphene	180	U
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	73	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM197

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835283

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	0.063	JF
76-44-8-----	Heptachlor	0.26	JF
309-00-2-----	Aldrin	2.0	U
1024-57-3-----	Heptachlor epoxide	2.0	U
959-98-8-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	0.62	JF
72-55-9-----	4,4'-DDE	3.9	U
72-20-8-----	Endrin	0.85	J
33213-65-9-----	Endosulfan II	3.9	U
72-54-8-----	4,4'-DDD	0.45	JF
1031-07-8-----	Endosulfan sulfate	3.9	U
50-29-3-----	4,4'-DDT	0.69	JF
72-43-5-----	Methoxychlor	0.58	JFB
53494-70-5-----	Endrin ketone	3.9	U
7421-93-4-----	Endrin aldehyde	3.9	U
5103-71-9-----	alpha-Chlordane	0.074	JF
5103-74-2-----	gamma-Chlordane	0.12	JF
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	39	U
11104-28-2-----	Aroclor-1221	79	U
11141-16-5-----	Aroclor-1232	39	U
53469-21-9-----	Aroclor-1242	39	U
12672-29-6-----	Aroclor-1248	39	U
11097-69-1-----	Aroclor-1254	39	U
11096-82-5-----	Aroclor-1260	39	U

FORM I PEST

recycled paper
recycled paper

ma 1/17/97
ecology and environment
ecology and environment

OLM03.0

1037

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM196

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835282

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 11 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) .SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	0.67	JPB 4
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	75	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM195

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835281
Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____
% Moisture: 11 decanted: (Y/N) N Date Received: 12/21/96
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/97
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	0.85	JB 4
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	75	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U

FORM I PEST

OLM03.0

recycled paper
recycled paper

ecology and environment
ecology and environment

Handwritten signature and date: 12/17/97

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM194

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835280

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: _____

% Moisture: 21 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/01/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

319-84-6-----	alpha-BHC	2.1	U
319-85-7-----	beta-BHC	2.1	U
319-86-8-----	delta-BHC	2.1	U
58-89-9-----	gamma-BHC (Lindane)	2.1	U
76-44-8-----	Heptachlor	2.1	U
309-00-2-----	Aldrin	2.1	U
1024-57-3-----	Heptachlor epoxide	2.1	U
959-98-8-----	Endosulfan I	2.1	U
60-57-1-----	Dieldrin	4.2	U
72-55-9-----	4,4'-DDE	0.41	J
72-20-8-----	Endrin	4.2	U
33213-65-9-----	Endosulfan II	4.2	U
72-54-8-----	4,4'-DDD	4.2	U
1031-07-8-----	Endosulfan sulfate	0.35	JF 4
50-29-3-----	4,4'-DDT	0.69	JF
72-43-5-----	Methoxychlor	0.79	JF 4
53494-70-5-----	Endrin ketone	4.2	U
7421-93-4-----	Endrin aldehyde	4.2	U
5103-71-9-----	alpha-Chlordane	0.14	JF
5103-74-2-----	gamma-Chlordane	2.1	U
8001-35-2-----	Toxaphene	210	U
12674-11-2-----	Aroclor-1016	42	U
11104-28-2-----	Aroclor-1221	84	U
11141-16-5-----	Aroclor-1232	42	U
53469-21-9-----	Aroclor-1242	42	U
12672-29-6-----	Aroclor-1248	42	U
11097-69-1-----	Aroclor-1254	42	U
11096-82-5-----	Aroclor-1260	42	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM193

Lab Name: COMPU-CHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835279
Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____
% Moisture: 11 decanted: (Y/N) N Date Received: 12/21/96
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/01/97
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	0.16	J
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	19	U
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	74	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	26	J
11096-82-5-----	Aroclor-1260	37	U

FORM I PEST

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM192

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835278

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6-----	alpha-BHC	1.9 U	
319-85-7-----	beta-BHC	1.9 U	
319-86-8-----	delta-BHC	1.9 U	
58-89-9-----	gamma-BHC (Lindane)	1.9 U	
76-44-8-----	Heptachlor	1.9 U	
309-00-2-----	Aldrin	1.9 U	
1024-57-3-----	Heptachlor epoxide	1.9 U	
959-98-8-----	Endosulfan I	1.9 U	
60-57-1-----	Dieldrin	3.8 U	
72-55-9-----	4,4'-DDE	3.8 U	
72-20-8-----	Endrin	3.8 U	
33213-65-9-----	Endosulfan II	3.8 U	
72-54-8-----	4,4'-DDD	3.8 U	
1031-07-8-----	Endosulfan sulfate	3.8 U	
50-29-3-----	4,4'-DDT	3.8 U	
72-43-5-----	Methoxychlor	0.74 U	4
53494-70-5-----	Endrin ketone	3.8 U	
7421-93-4-----	Endrin aldehyde	3.8 U	
5103-71-9-----	alpha-Chlordane	1.9 U	
5103-74-2-----	gamma-Chlordane	1.9 U	
8001-35-2-----	Toxaphene	190 U	
12674-11-2-----	Aroclor-1016	38 U	
11104-28-2-----	Aroclor-1221	76 U	
11141-16-5-----	Aroclor-1232	38 U	
53469-21-9-----	Aroclor-1242	38 U	
12672-29-6-----	Aroclor-1248	38 U	
11097-69-1-----	Aroclor-1254	38 U	
11096-82-5-----	Aroclor-1260	38 U	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM191

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835277
Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____
% Moisture: 17 decanted: (Y/N) N Date Received: 12/21/96
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/31/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	2.0	U
76-44-8-----	Heptachlor	2.0	U
309-00-2-----	Aldrin	2.0	U
1024-57-3-----	Heptachlor epoxide	2.0	U
959-98-8-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	4.0	U
72-55-9-----	4,4'-DDE	4.0	U
72-20-8-----	Endrin	4.0	U
33213-65-9-----	Endosulfan II	4.0	U
72-54-8-----	4,4'-DDD	4.0	U
1031-07-8-----	Endosulfan sulfate	4.0	U
50-29-3-----	4,4'-DDT	4.0	U
72-43-5-----	Methoxychlor	0.55	JPB 4
53494-70-5-----	Endrin ketone	4.0	U
7421-93-4-----	Endrin aldehyde	4.0	U
5103-71-9-----	alpha-Chlordane	2.0	U
5103-74-2-----	gamma-Chlordane	2.0	U
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	40	U
11104-28-2-----	Aroclor-1221	80	U
11141-16-5-----	Aroclor-1232	40	U
53469-21-9-----	Aroclor-1242	40	U
12672-29-6-----	Aroclor-1248	40	U
11097-69-1-----	Aroclor-1254	40	U
11096-82-5-----	Aroclor-1260	40	U

FORM I PEST

OLM03.0

recycled paper
recycled paper

ecology and environment
ecology and environment

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM178

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835276

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/03/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	0.90	U
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	76	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U

1D
PESTICIDE ORGANICS ANALYSIS' DATA SHEET

EPA SAMPLE NO.

JM177

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835275

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/03/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.1

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/KG

Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.6	U
72-55-9-----	4,4'-DDE	1.6	JF
72-20-8-----	Endrin	3.6	U
33213-65-9-----	Endosulfan II	3.6	U
72-54-8-----	4,4'-DDD	3.6	U
1031-07-8-----	Endosulfan sulfate	3.6	U
50-29-3-----	4,4'-DDT	1.1	JF
72-43-5-----	Methoxychlor	0.47	JFB 4
53494-70-5-----	Endrin ketone	3.6	U
7421-93-4-----	Endrin aldehyde	3.6	U
5103-71-9-----	alpha-Chlordane	0.13	JF
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	73	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U

FORM I PEST

OLM03.0

recycled paper
recycled paper

ecology and environment
ecology and environment

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM176

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835274

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/03/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	2.0	U
76-44-8-----	Heptachlor	2.0	U
309-00-2-----	Aldrin	2.0	U
1024-57-3-----	Heptachlor epoxide	2.0	U
959-98-8-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	3.8	U
72-55-9-----	4,4'-DDE	3.8	U
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	3.8	U
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	3.8	U
72-43-5-----	Methoxychlor	0.47	U ^{JPB 4}
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	3.8	U
5103-71-9-----	alpha-Chlordane	2.0	U
5103-74-2-----	gamma-Chlordane	2.0	U
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	78	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM175

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835273

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/03/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	0.27	JF	✓
319-85-7-----	beta-BHC	2.0	U	
319-86-8-----	delta-BHC	0.10	JF	✓
58-89-9-----	gamma-BHC (Lindane)	2.0	U	
76-44-8-----	Heptachlor	2.0	U	
309-00-2-----	Aldrin	2.0	U	
1024-57-3-----	Heptachlor epoxide	0.22	JF	✓
959-98-8-----	Endosulfan I	2.0	U	
60-57-1-----	Dieldrin	1.1	J	✓
72-55-9-----	4,4'-DDE	0.29	JF	✓
72-20-8-----	Endrin	0.74	JF	✓
33213-65-9-----	Endosulfan II	3.9	U	
72-54-8-----	4,4'-DDD	0.31	JF	✓
1031-07-8-----	Endosulfan sulfate	3.9	U	
50-29-3-----	4,4'-DDT	1.1	J	✓
72-43-5-----	Methoxychlor	20	U	
53494-70-5-----	Endrin ketone	3.9	U	
7421-93-4-----	Endrin aldehyde	3.9	U	
5103-71-9-----	alpha-Chlordane	2.0	U	
5103-74-2-----	gamma-Chlordane	2.0	U	
8001-35-2-----	Toxaphene	200	U	
12674-11-2-----	Aroclor-1016	39	U	
11104-28-2-----	Aroclor-1221	78	U	
11141-16-5-----	Aroclor-1232	39	U	
53469-21-9-----	Aroclor-1242	39	U	
12672-29-6-----	Aroclor-1248	39	U	
11097-69-1-----	Aroclor-1254	39	U	
11096-82-5-----	Aroclor-1260	39	U	

FORM I PEST

recycled paper
recycled paper

OLM03.0
ecology and environment
ecology and environment

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM174

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835272

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: _____

% Moisture: 15 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/03/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/KG

Q

319-84-6-----	alpha-BHC	2.0	U
319-85-7-----	beta-BHC	2.0	U
319-86-8-----	delta-BHC	2.0	U
58-89-9-----	gamma-BHC (Lindane)	2.0	U
76-44-8-----	Heptachlor	2.0	U
309-00-2-----	Aldrin	2.0	U
1024-57-3-----	Heptachlor epoxide	2.0	U
959-98-8-----	Endosulfan I	2.0	U
60-57-1-----	Dieldrin	3.8	U
72-55-9-----	4,4'-DDE	3.8	U
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	3.8	U
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	3.8	U
72-43-5-----	Methoxychlor	0.93	U ⁴
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	3.8	U
5103-71-9-----	alpha-Chlordane	2.0	U
5103-74-2-----	gamma-Chlordane	2.0	U
8001-35-2-----	Toxaphene	200	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	78	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM173

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835271

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/03/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.5

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	0.40	JP
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.8	U
72-55-9-----	4,4'-DDE	3.8	U
72-20-8-----	Endrin	3.8	U
33213-65-9-----	Endosulfan II	3.8	U
72-54-8-----	4,4'-DDD	3.8	U
1031-07-8-----	Endosulfan sulfate	3.8	U
50-29-3-----	4,4'-DDT	0.25	JP
72-43-5-----	Methoxychlor	0.77	JPS U
53494-70-5-----	Endrin ketone	3.8	U
7421-93-4-----	Endrin aldehyde	3.8	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	77	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U

FORM I PEST

OLM03.0

recycled paper
recycled paper

ecology and environment
ecology and environment

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM172

Lab Name: COMPU-CHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835270
Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____
% Moisture: 9 decanted: (Y/N) N Date Received: 12/21/96
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/03/97
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Diieldrin	3.6	U
72-55-9	4,4'-DDE	3.6	U
72-20-8	Endrin	3.6	U
33213-65-9	Endosulfan II	3.6	U
72-54-8	4,4'-DDD	3.6	U
1031-07-8	Endosulfan sulfate	3.6	U
50-29-3	4,4'-DDT	3.6	U
72-43-5	Methoxychlor	0.85	U 4
53494-70-5	Endrin ketone	3.6	U
7421-93-4	Endrin aldehyde	3.6	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	1.8	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	73	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM171

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835269

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 11 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.7	U
72-55-9-----	4,4'-DDE	3.7	U
72-20-8-----	Endrin	3.7	U
33213-65-9-----	Endosulfan II	3.7	U
72-54-8-----	4,4'-DDD	3.7	U
1031-07-8-----	Endosulfan sulfate	3.7	U
50-29-3-----	4,4'-DDT	3.7	U
72-43-5-----	Methoxychlor	0.97	JPB U
53494-70-5-----	Endrin ketone	3.7	U
7421-93-4-----	Endrin aldehyde	3.7	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	75	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U

FORM I PEST

OLM03.0

recycled paper
recycled paper

ecology and environment
ecology and environment

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM170

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835268

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.9

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	1.8	U
319-85-7-----	beta-BHC	1.8	U
319-86-8-----	delta-BHC	1.8	U
58-89-9-----	gamma-BHC (Lindane)	0.041	JP ✓
76-44-8-----	Heptachlor	1.8	U
309-00-2-----	Aldrin	1.8	U
1024-57-3-----	Heptachlor epoxide	1.8	U
959-98-8-----	Endosulfan I	1.8	U
60-57-1-----	Dieldrin	3.6	U ✓
72-55-9-----	4,4'-DDE	1.9	J ✓
72-20-8-----	Endrin	3.6	U
33213-65-9-----	Endosulfan II	3.6	U
72-54-8-----	4,4'-DDD	0.18	JP ✓
1031-07-8-----	Endosulfan sulfate	3.6	U
50-29-3-----	4,4'-DDT	3.8	
72-43-5-----	Methoxychlor	0.86	JPB ✓
53494-70-5-----	Endrin ketone	3.6	U
7421-93-4-----	Endrin aldehyde	3.6	U
5103-71-9-----	alpha-Chlordane	1.8	U
5103-74-2-----	gamma-Chlordane	1.8	U
8001-35-2-----	Toxaphene	180	U
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	73	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM168

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835267

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.9	U
319-85-7-----	beta-BHC	1.9	U
319-86-8-----	delta-BHC	1.9	U
58-89-9-----	gamma-BHC (Lindane)	1.9	U
76-44-8-----	Heptachlor	1.9	U
309-00-2-----	Aldrin	1.9	U
1024-57-3-----	Heptachlor epoxide	1.9	U
959-98-8-----	Endosulfan I	1.9	U
60-57-1-----	Dieldrin	3.6	U
72-55-9-----	4,4'-DDE	3.6	U
72-20-8-----	Endrin	3.6	U
33213-65-9-----	Endosulfan II	3.6	U
72-54-8-----	4,4'-DDD	0.090	U
1031-07-8-----	Endosulfan sulfate	3.6	U
50-29-3-----	4,4'-DDT	3.6	U
72-43-5-----	Methoxychlor	0.88	U
53494-70-5-----	Endrin ketone	3.6	U
7421-93-4-----	Endrin aldehyde	3.6	U
5103-71-9-----	alpha-Chlordane	1.9	U
5103-74-2-----	gamma-Chlordane	1.9	U
8001-35-2-----	Toxaphene	190	U
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	73	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U

FORM I PEST

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM157

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM155
Matrix: (soil/water) SOIL Lab Sample ID: 835266
Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____
% Moisture: 9 decanted: (Y/N) N Date Received: 12/21/96
Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/23/96
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/02/97
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-5-----	alpha-BHC	1.8 U	
319-85-7-----	beta-BHC	1.8 U	
319-86-8-----	delta-BHC	1.8 U	
58-89-9-----	gamma-BHC (Lindane)	0.058 JP	
76-44-8-----	Heptachlor	1.8 U	
309-00-2-----	Aldrin	1.8 U	
1024-57-3-----	Heptachlor epoxide	1.8 U	
959-98-8-----	Endosulfan I	1.8 U	
60-57-1-----	Dieldrin	3.6 U	
72-55-9-----	4,4'-DDE	3.6 U	
72-20-8-----	Endrin	3.6 U	
33213-65-9-----	Endosulfan II	3.6 U	
72-54-8-----	4,4'-DDD	3.6 U	
1031-07-8-----	Endosulfan sulfate	3.6 U	
50-29-3-----	4,4'-DDT	3.6 U	
72-43-5-----	Methoxychlor	0.69 JP	
53494-70-5-----	Endrin ketone	3.6 U	
7421-93-4-----	Endrin aldehyde	3.6 U	
5103-71-9-----	alpha-Chlordane	1.8 U	
5103-74-2-----	gamma-Chlordane	1.8 U	
8001-35-2-----	Toxaphene	180 U	
12674-11-2-----	Aroclor-1016	36 U	
11104-28-2-----	Aroclor-1221	73 U	
11141-16-5-----	Aroclor-1232	36 U	
53469-21-9-----	Aroclor-1242	36 U	
12672-29-6-----	Aroclor-1248	36 U	
11097-69-1-----	Aroclor-1254	36 U	
11096-82-5-----	Aroclor-1260	36 U	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM166

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835257

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N

Date Received: 12/21/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 12/23/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 01/02/97

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.7

Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6	alpha-BHC	1.9	U
319-85-7	beta-BHC	1.9	U
319-86-8	delta-BHC	1.9	U
58-89-9	gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	3.7	U
72-55-9	4,4'-DDE	3.7	U
72-20-8	Endrin	3.7	U
33213-65-9	Endosulfan II	3.7	U
72-54-8	4,4'-DDD	0.13	JP
1031-07-8	Endosulfan sulfate	3.7	U
50-29-3	4,4'-DDT	3.7	U
72-43-5	Methoxychlor	0.58	JPB U
53494-70-5	Endrin ketone	3.7	U
7421-93-4	Endrin aldehyde	3.7	U
5103-71-9	alpha-Chlordane	1.9	U
5103-74-2	gamma-Chlordane	1.9	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	76	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U

FORM I PEST

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM198

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835284

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035284A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.9

CONCENTRATION UNITS:

Number TICs found: 7

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	M-DOL (BC)	4.41	6300	JAB R
2.	UNKNOWN (BC)	4.64	320	JB
3. 822 86 6	CYCLOHEXANE, 1,2 DICHLORO	7.38	130	NJB
4.	UNKNOWN CARBOXYLIC ACID	14.83	110	JN
5.	UNKNOWN	17.45	210	J
6.	UNKNOWN	18.06	76	J
7.	UNKNOWN	23.00	190	J
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

[Handwritten signature]
756

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM198

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835284

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035284A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

51-28-5-----	2,4-Dinitrophenol	910	UJ
100-02-7-----	4-Nitrophenol	910	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	360	U
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	910	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	910	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	910	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	360	U
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	UJ
56-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	76	J
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM198

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835284

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035284A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy)methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	910	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	910	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	910	U
83-32-9-----	Acenaphthene	360	U

FORM I SV-1

OLM03.0

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM197

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835283

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035283A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

CONCENTRATION UNITS:

Number TICs found: 3

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.42	6200	JAB R
2.	UNKNOWN (BC)	4.64	300	JB R
3.	UNKNOWN	17.45	380	JN
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM197

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835283

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035283A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	980	UJ
100-02-7-----	4-Nitrophenol	980	U
132-64-9-----	Dibenzofuran	390	U
121-14-2-----	2,4-Dinitrotoluene	390	U
84-66-2-----	Diethylphthalate	390	U
7005-72-3-----	4-Chlorophenyl-phenylether	390	U
86-73-7-----	Fluorene	390	U
100-01-6-----	4-Nitroaniline	980	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	980	U
86-30-6-----	N-nitrosodiphenylamine (1)	390	U
101-55-3-----	4-Bromophenyl-phenylether	390	U
118-74-1-----	Hexachlorobenzene	390	U
87-86-5-----	Pentachlorophenol	980	U
85-01-8-----	Phenanthrene	390	U
120-12-7-----	Anthracene	390	U
86-74-8-----	Carbazole	390	U
84-74-2-----	Di-n-butylphthalate	390	U
206-44-0-----	Fluoranthene	390	U
129-00-0-----	Pyrene	390	U
85-68-7-----	Butylbenzylphthalate	390	U
91-94-1-----	3,3'-Dichlorobenzidine	390	U
56-55-3-----	Benzo(a)anthracene	390	U
218-01-9-----	Chrysene	390	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	52	J
117-84-0-----	Di-n-octylphthalate	390	U
205-99-2-----	Benzo(b)fluoranthene	390	U
207-08-9-----	Benzo(k)fluoranthene	390	U
50-32-8-----	Benzo(a)pyrene	390	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	390	U
53-70-3-----	Dibenzo(a,h)anthracene	390	U
191-24-2-----	Benzo(g,h,i)perylene	390	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM197

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835283

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035283A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 16 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

108-95-2-----	Phenol	390	U
111-44-4-----	bis(2-Chloroethyl)ether	390	U
95-57-8-----	2-Chlorophenol	390	U
541-73-1-----	1,3-Dichlorobenzene	390	U
106-46-7-----	1,4-Dichlorobenzene	390	U
95-50-1-----	1,2-Dichlorobenzene	390	U
95-48-7-----	2-Methylphenol	390	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5-----	4-Methylphenol	390	U
621-64-7-----	N-Nitroso-di-n-propylamine	390	U
67-72-1-----	Hexachloroethane	390	U
98-95-3-----	Nitrobenzene	390	U
78-59-1-----	Isophorone	390	U
88-75-5-----	2-Nitrophenol	390	U
105-67-9-----	2,4-Dimethylphenol	390	U
111-91-1-----	bis(2-Chloroethoxy)methane	390	U
120-83-2-----	2,4-Dichlorophenol	390	U
120-82-1-----	1,2,4-Trichlorobenzene	390	U
91-20-3-----	Naphthalene	390	U
106-47-8-----	4-Chloroaniline	390	U
87-68-3-----	Hexachlorobutadiene	390	U
59-50-7-----	4-Chloro-3-methylphenol	390	U
91-57-6-----	2-Methylnaphthalene	390	U
77-47-4-----	Hexachlorocyclopentadiene	390	U
88-06-2-----	2,4,6-Trichlorophenol	390	U
95-95-4-----	2,4,5-Trichlorophenol	980	U
91-58-7-----	2-Chloronaphthalene	390	U
88-74-4-----	2-Nitroaniline	980	U
131-11-3-----	Dimethylphthalate	390	U
208-96-8-----	Acenaphthylene	390	U
606-20-2-----	2,6-Dinitrotoluene	390	U
99-09-2-----	3-Nitroaniline	980	U
83-32-9-----	Acenaphthene	390	U

FORM I SV-1

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM196

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835282

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035282A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 11 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.6

Number TICs found: 16

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.42	6900	JAB
2.	UNKNOWN (BC)	4.63	340	JB
3. 822 85 5	CYCLOHEXANE, 1,2-DICHLORO	7.38	170	NJB
4.	UNKNOWN CARBOXYLIC ACID	14.84	750	JN
5.	UNKNOWN	16.56	83	J
6.	UNKNOWN	17.45	450	J
7.	UNKNOWN ALCOHOL	18.06	440	J
8.	UNKNOWN ALCOHOL	20.08	230	J
9.	UNKNOWN	21.17	370	J
10.	UNKNOWN	22.27	110	J
11.	UNKNOWN	22.49	99	J
12.	UNKNOWN	22.99	530	J
13.	UNKNOWN	23.11	160	J
14.	UNKNOWN	23.56	160	J
15.	UNKNOWN	23.86	82	J
16.	UNKNOWN	24.27	260	JN
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM196

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835282

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035282A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 11 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

51-28-5-----	2,4-Dinitrophenol	930	UJ
100-02-7-----	4-Nitrophenol	930	U
132-64-9-----	Dibenzofuran	370	U
121-14-2-----	2,4-Dinitrotoluene	370	U
84-66-2-----	Diethylphthalate	370	U
7005-72-3-----	4-Chlorophenyl-phenylether	370	U
86-73-7-----	Fluorene	370	U
100-01-6-----	4-Nitroaniline	930	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	930	U
86-30-6-----	N-nitrosodiphenylamine (1)	370	U
101-55-3-----	4-Bromophenyl-phenylether	370	U
118-74-1-----	Hexachlorobenzene	370	U
87-86-5-----	Pentachlorophenol	930	U
85-01-8-----	Phenanthrene	370	U
120-12-7-----	Anthracene	370	U
86-74-8-----	Carbazole	370	U
84-74-2-----	Di-n-butylphthalate	370	U
206-44-0-----	Fluoranthene	370	U
129-00-0-----	Pyrene	370	U
85-68-7-----	Butylbenzylphthalate	370	U
91-94-1-----	3,3'-Dichlorobenzidine	370	UJ
56-55-3-----	Benzo(a)anthracene	370	U
218-01-9-----	Chrysene	370	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	100	J
117-84-0-----	Di-n-octylphthalate	370	U
205-99-2-----	Benzo(b)fluoranthene	370	U
207-08-9-----	Benzo(k)fluoranthene	370	U
50-32-8-----	Benzo(a)pyrene	370	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	370	U
53-70-3-----	Dibenzo(a,h)anthracene	370	U
191-24-2-----	Benzo(g,h,i)perylene	370	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

recycled paper
recycled paper

ecology and environment
ecology and environment

OLM03.0

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM196

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835282

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035282A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 11 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/Kg

Q

108-95-2-----	Phenol	370	U
111-44-4-----	bis(2-Chloroethyl) ether	370	U
95-57-8-----	2-Chlorophenol	370	U
541-73-1-----	1,3-Dichlorobenzene	370	U
106-46-7-----	1,4-Dichlorobenzene	370	U
95-50-1-----	1,2-Dichlorobenzene	370	U
95-48-7-----	2-Methylphenol	370	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5-----	4-Methylphenol	370	U
621-64-7-----	N-Nitroso-di-n-propylamine	370	U
67-72-1-----	Hexachloroethane	370	U
98-95-3-----	Nitrobenzene	370	U
78-59-1-----	Isophorone	370	U
88-75-5-----	2-Nitrophenol	370	U
105-67-9-----	2,4-Dimethylphenol	370	U
111-91-1-----	bis(2-Chloroethoxy) methane	370	U
120-83-2-----	2,4-Dichlorophenol	370	U
120-82-1-----	1,2,4-Trichlorobenzene	370	U
91-20-3-----	Naphthalene	370	U
106-47-8-----	4-Chloroaniline	370	U
87-68-3-----	Hexachlorobutadiene	370	U
59-50-7-----	4-Chloro-3-methylphenol	370	U
91-57-6-----	2-Methylnaphthalene	370	U
77-47-4-----	Hexachlorocyclopentadiene	370	U
88-06-2-----	2,4,6-Trichlorophenol	370	U
95-95-4-----	2,4,5-Trichlorophenol	930	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	930	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	930	U
83-32-9-----	Acenaphthene	370	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM195

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835281

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035281A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 11 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

Number TICs found: 12

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.43	8300	JAB R
2.	UNKNOWN (BC)	4.63	820	JB R
3. 822-67-3	2-CYCLOHEXEN-1-OL	5.06	160	NJ
4. 930-68-7	2-CYCLOHEXEN-1-ONE	5.64	130	NJ
5.	UNKNOWN	7.12	79	JN
6. 822-86-5	CYCLOHEXANE, 1,2-DICHLORO	7.38	260	NJB R
7.	UNKNOWN CARBOXYLIC ACID	14.82	75	JN
8.	UNKNOWN	17.45	380	J
9.	UNKNOWN	17.91	160	J
10.	UNKNOWN	17.98	180	J
11.	UNKNOWN	18.02	550	J
12.	UNKNOWN	19.94	110	J
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC

recycled paper
recycled paper

OLM03.0

ecology and environment
ecology and environment

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM195

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835281
Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035281A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 11 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	930	UJ
100-02-7-----	4-Nitrophenol	930	U
132-64-9-----	Dibenzofuran	370	U
121-14-2-----	2,4-Dinitrotoluene	370	U
84-66-2-----	Diethylphthalate	370	U
7005-72-3-----	4-Chlorophenyl-phenylether	370	U
86-73-7-----	Fluorene	370	U
100-01-6-----	4-Nitroaniline	930	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	930	U
86-30-6-----	N-nitrosodiphenylamine (1)	370	U
101-55-3-----	4-Bromophenyl-phenylether	370	U
118-74-1-----	Hexachlorobenzene	370	U
87-86-5-----	Pentachlorophenol	930	U
85-01-8-----	Phenanthrene	370	U
120-12-7-----	Anthracene	370	U
86-74-8-----	Carbazole	370	U
84-74-2-----	Di-n-butylphthalate	370	U
206-44-0-----	Fluoranthene	370	U
129-00-0-----	Pyrene	370	U
85-68-7-----	Butylbenzylphthalate	370	U
91-94-1-----	3,3'-Dichlorobenzidine	370	UJ
56-55-3-----	Benzo(a)anthracene	370	U
218-01-9-----	Chrysene	370	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	120	J
117-84-0-----	Di-n-octylphthalate	370	U
205-99-2-----	Benzo(b)fluoranthene	370	U
207-08-9-----	Benzo(k)fluoranthene	370	U
50-32-8-----	Benzo(a)pyrene	370	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	370	U
53-70-3-----	Dibenzo(a,h)anthracene	370	U
191-24-2-----	Benzo(g,h,i)perylene	370	U

(1) - Cannot be separated from Diphenylamine

11/18/97 673

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM195

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835281
Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035281A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 11 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	370	U
111-44-4-----	bis(2-Chloroethyl) ether	370	U
95-57-8-----	2-Chlorophenol	370	U
541-73-1-----	1,3-Dichlorobenzene	370	U
106-46-7-----	1,4-Dichlorobenzene	370	U
95-50-1-----	1,2-Dichlorobenzene	370	U
95-48-7-----	2-Methylphenol	370	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5-----	4-Methylphenol	370	U
621-64-7-----	N-Nitroso-di-n-propylamine	370	U
67-72-1-----	Hexachloroethane	370	U
98-95-3-----	Nitrobenzene	370	U
78-59-1-----	Isophorone	370	U
88-75-5-----	2-Nitrophenol	370	U
105-67-9-----	2,4-Dimethylphenol	370	U
111-91-1-----	bis(2-Chloroethoxy) methane	370	U
120-83-2-----	2,4-Dichlorophenol	370	U
120-82-1-----	1,2,4-Trichlorobenzene	370	U
91-20-3-----	Naphthalene	370	U
106-47-8-----	4-Chloroaniline	370	U
87-68-3-----	Hexachlorobutadiene	370	U
59-50-7-----	4-Chloro-3-methylphenol	370	U
91-57-6-----	2-Methylnaphthalene	370	U
77-47-4-----	Hexachlorocyclopentadiene	370	U
88-06-2-----	2,4,6-Trichlorophenol	370	U
95-95-4-----	2,4,5-Trichlorophenol	930	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	930	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	930	U
83-32-9-----	Acenaphthene	370	U

FORM I SV-1

recycled paper
recycled paper

ecology and environment
ecology and environment
OLM03.0

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM194

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835280

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035280A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 21 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.7

CONCENTRATION UNITS:

Number TICs found: 28

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.41	8100	JAB R
2.	UNKNOWN (BC)	4.63	360	JB R
3. 930-58-7	2-CYCLOHEXEN-1-ONE	5.63	87	NJ
4. 833-86-6	CYCLOHEXANE, 1,2-DICHLORO	7.37	93	NJB R
5.	UNKNOWN	14.78	95	JN
6.	UNKNOWN CARBOXYLIC ACID	14.83	240	J
7.	UNKNOWN	15.91	110	J
8.	UNKNOWN	17.08	100	J
9.	UNKNOWN	17.18	150	J
10.	UNKNOWN	17.24	120	J
11.	UNKNOWN	17.32	120	J
12.	UNKNOWN	17.45	97	J
13.	UNKNOWN ALCOHOL	18.05	610	J
14.	UNKNOWN AMIDE	19.50	120	J
15.	UNKNOWN	19.74	240	J
16.	UNKNOWN	20.61	290	J
17.	UNKNOWN ALCOHOL	21.17	560	J
18.	UNKNOWN	21.27	93	J
19.	UNKNOWN	22.27	280	J
20.	UNKNOWN	22.99	2100	J
21.	UNKNOWN	23.15	560	J
22.	UNKNOWN	23.37	350	J
23.	UNKNOWN	23.46	330	J
24.	UNKNOWN	23.63	490	J
25.	UNKNOWN	23.86	140	J
26.	UNKNOWN	23.96	680	J
27.	UNKNOWN	24.09	200	J
28.	UNKNOWN	24.28	560	JN
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM194

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835280

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035280A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 21 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

51-28-5-----	2,4-Dinitrophenol	1000	UJ
100-02-7-----	4-Nitrophenol	1000	U
132-64-9-----	Dibenzofuran	420	U
121-14-2-----	2,4-Dinitrotoluene	420	U
84-66-2-----	Diethylphthalate	420	U
7005-72-3-----	4-Chlorophenyl-phenylether	420	U
86-73-7-----	Fluorene	420	U
100-01-6-----	4-Nitroaniline	1000	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	1000	U
86-30-6-----	N-nitrosodiphenylamine (1)	420	U
101-55-3-----	4-Bromophenyl-phenylether	420	U
118-74-1-----	Hexachlorobenzene	420	U
87-86-5-----	Pentachlorophenol	1000	U
85-01-8-----	Phenanthrene	420	U
120-12-7-----	Anthracene	420	U
86-74-8-----	Carbazole	420	U
84-74-2-----	Di-n-butylphthalate	420	U
206-44-0-----	Fluoranthene	420	U
129-00-0-----	Pyrene	420	U
85-68-7-----	Butylbenzylphthalate	420	U
91-94-1-----	3,3'-Dichlorobenzidine	420	UJ
56-55-3-----	Benzo (a) anthracene	420	U
218-01-9-----	Chrysene	420	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	120	J
117-84-0-----	Di-n-octylphthalate	420	U
205-99-2-----	Benzo (b) fluoranthene	420	U
207-08-9-----	Benzo (k) fluoranthene	420	U
50-32-8-----	Benzo (a) pyrene	420	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	420	U
53-70-3-----	Dibenzo (a,h) anthracene	420	U
191-24-2-----	Benzo (g,h,i) perylene	420	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

OLM03.0

recycled paper
recycled paper

ecology and environment
ecology and environment

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM194

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835280

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035280A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 21 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/Kg

Q

108-95-2-----	Phenol	420	U
111-44-4-----	bis(2-Chloroethyl) ether	420	U
95-57-8-----	2-Chlorophenol	420	U
541-73-1-----	1,3-Dichlorobenzene	420	U
106-46-7-----	1,4-Dichlorobenzene	420	U
95-50-1-----	1,2-Dichlorobenzene	420	U
95-48-7-----	2-Methylphenol	420	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	420	U
106-44-5-----	4-Methylphenol	420	U
621-64-7-----	N-Nitroso-di-n-propylamine	420	U
67-72-1-----	Hexachloroethane	420	U
98-95-3-----	Nitrobenzene	420	U
78-59-1-----	Isophorone	420	U
88-75-5-----	2-Nitrophenol	420	U
105-67-9-----	2,4-Dimethylphenol	420	U
111-91-1-----	bis(2-Chloroethoxy)methane	420	U
120-83-2-----	2,4-Dichlorophenol	420	U
120-82-1-----	1,2,4-Trichlorobenzene	420	U
91-20-3-----	Naphthalene	420	U
106-47-8-----	4-Chloroaniline	420	U
87-68-3-----	Hexachlorobutadiene	420	U
59-50-7-----	4-Chloro-3-methylphenol	420	U
91-57-6-----	2-Methylnaphthalene	420	U
77-47-4-----	Hexachlorocyclopentadiene	420	U
88-06-2-----	2,4,6-Trichlorophenol	420	U
95-95-4-----	2,4,5-Trichlorophenol	1000	U
91-58-7-----	2-Chloronaphthalene	420	U
88-74-4-----	2-Nitroaniline	1000	U
131-11-3-----	Dimethylphthalate	420	U
208-96-8-----	Acenaphthylene	420	U
606-20-2-----	2,6-Dinitrotoluene	420	U
99-09-2-----	3-Nitroaniline	1000	U
83-32-9-----	Acenaphthene	420	U

[Handwritten signature]

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM178

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835276

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GJ035276C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 7

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.36	5000	JAB R
2.	UNKNOWN (BC)	4.59	300	JB
3. 822 86 6	CYCLOHEXANE, 1,2 DICHLORO	7.32	98	NJB ↓
4.	UNKNOWN ALCOHOL	18.00	200	JJ
5.	UNKNOWN ALCOHOL	19.06	170	J
6.	UNKNOWN	22.88	350	J ↓
7.	UNKNOWN	24.11	160	J ↓
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM178

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM165
Matrix: (soil/water) SOIL Lab Sample ID: 835276
Sample wt/vol: 30.0 (g/mL) g Lab File ID: GJ035276C64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 12 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/31/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	940	U J
100-02-7-----	4-Nitrophenol	940	U
132-64-9-----	Dibenzofuran	380	U
121-14-2-----	2,4-Dinitrotoluene	380	U
84-66-2-----	Diethylphthalate	380	U
7005-72-3-----	4-Chlorophenyl-phenylether	380	U
86-73-7-----	Fluorene	380	U
100-01-6-----	4-Nitroaniline	940	U J
534-52-1-----	4,6-Dinitro-2-methylphenol	940	U
86-30-6-----	N-nitrosodiphenylamine (1)	380	U
101-55-3-----	4-Bromophenyl-phenylether	380	U
118-74-1-----	Hexachlorobenzene	380	U
87-86-5-----	Pentachlorophenol	940	U
85-01-8-----	Phenanthrene	380	U
120-12-7-----	Anthracene	380	U
86-74-8-----	Carbazole	380	U
84-74-2-----	Di-n-butylphthalate	380	U
206-44-0-----	Fluoranthene	380	U
129-00-0-----	Pyrene	380	U
85-68-7-----	Butylbenzylphthalate	380	U
91-94-1-----	3,3'-Dichlorobenzidine	380	U J
56-55-3-----	Benzo(a)anthracene	380	U
218-01-9-----	Chrysene	380	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	68	J ✓
117-84-0-----	Di-n-octylphthalate	380	U
205-99-2-----	Benzo(b)fluoranthene	380	U
207-08-9-----	Benzo(k)fluoranthene	380	U
50-32-8-----	Benzo(a)pyrene	380	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	380	U
53-70-3-----	Dibenzo(a,h)anthracene	380	U
191-24-2-----	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM178

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835276

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GJ035276C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/31/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	380	U
111-44-4-----	bis(2-Chloroethyl) ether	380	U
95-57-8-----	2-Chlorophenol	380	U
541-73-1-----	1,3-Dichlorobenzene	380	U
106-46-7-----	1,4-Dichlorobenzene	380	U
95-50-1-----	1,2-Dichlorobenzene	380	U
95-48-7-----	2-Methylphenol	380	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5-----	4-Methylphenol	380	U
621-64-7-----	N-Nitroso-di-n-propylamine	380	U
67-72-1-----	Hexachloroethane	380	U
98-95-3-----	Nitrobenzene	380	U
78-59-1-----	Isophorone	380	U
88-75-5-----	2-Nitrophenol	380	U
105-67-9-----	2,4-Dimethylphenol	380	U
111-91-1-----	bis(2-Chloroethoxy) methane	380	U
120-83-2-----	2,4-Dichlorophenol	380	U
120-82-1-----	1,2,4-Trichlorobenzene	380	U
91-20-3-----	Naphthalene	380	U
106-47-8-----	4-Chloroaniline	380	U
87-68-3-----	Hexachlorobutadiene	380	U
59-50-7-----	4-Chloro-3-methylphenol	380	U
91-57-6-----	2-Methylnaphthalene	380	U
77-47-4-----	Hexachlorocyclopentadiene	380	U
88-06-2-----	2,4,6-Trichlorophenol	380	U
95-95-4-----	2,4,5-Trichlorophenol	940	U
91-58-7-----	2-Chloronaphthalene	380	U
88-74-4-----	2-Nitroaniline	940	U
131-11-3-----	Dimethylphthalate	380	U
208-96-8-----	Acenaphthylene	380	U
606-20-2-----	2,6-Dinitrotoluene	380	U
99-09-2-----	3-Nitroaniline	940	U
83-32-9-----	Acenaphthene	380	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM177

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835275

Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035275A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 6

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALCOH (BC)	4.42	7000	JAB R
2.	UNKNOWN (BC)	4.63	440	JB R
3. 822-67-3	2-CYCLOHEXEN-1-OL	5.07	80	NJ
4. 930-68-7	2-CYCLOHEXEN-1-ONE	5.64	86	NJ
5. 822-86-6	CYCLOHEXANE, 1,2-DICHLORO	7.38	130	NJB R
6.	UNKNOWN	17.45	3800	JN
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

0583
JAN 11

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM177

Lab Name: COMPU-HEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835275

Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035275A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO. COMPOUND Q

51-28-5-----	2,4-Dinitrophenol	910	UJ
100-02-7-----	4-Nitrophenol	910	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	360	U
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	910	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	910	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	910	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	360	U
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	UJ
56-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	130	J
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM177

Lab Name: COMPU-CHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835275
Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035275A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.1

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy) methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	910	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	910	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	910	U
83-32-9-----	Acenaphthene	360	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM176

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835274

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035274C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 6

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.50	8800	JAB
2.	UNKNOWN (BC)	4.72	370	JB
3. 930-68-7	2-CYCLOHEXEN-1-ONE	5.71	120	NJ
4.	UNKNOWN	17.52	85	JJ
5.	UNKNOWN ALCOHOL	18.15	81	JJ
6.	UNKNOWN	23.22	110	JJ
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM176

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835274

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035274C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/Kg

Q

51-28-5-----	2,4-Dinitrophenol	980	UJ
100-02-7-----	4-Nitrophenol	980	U
132-64-9-----	Dibenzofuran	390	U
121-14-2-----	2,4-Dinitrotoluene	390	U
84-66-2-----	Diethylphthalate	390	U
7005-72-3-----	4-Chlorophenyl-phenylether	390	U
86-73-7-----	Fluorene	390	U
100-01-6-----	4-Nitroaniline	980	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	980	U
86-30-6-----	N-nitrosodiphenylamine (1)	390	U
101-55-3-----	4-Bromophenyl-phenylether	390	U
118-74-1-----	Hexachlorobenzene	390	U
87-86-5-----	Pentachlorophenol	980	U
85-01-8-----	Phenanthrene	390	U
120-12-7-----	Anthracene	390	U
86-74-8-----	Carbazole	390	U
84-74-2-----	Di-n-butylphthalate	390	U
206-44-0-----	Fluoranthene	390	U
129-00-0-----	Pyrene	390	U
85-68-7-----	Butylbenzylphthalate	390	U
91-94-1-----	3,3'-Dichlorobenzidine	390	UJ
56-55-3-----	Benzo(a)anthracene	390	U
218-01-9-----	Chrysene	390	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	57	J
117-84-0-----	Di-n-octylphthalate	390	U
205-99-2-----	Benzo(b)fluoranthene	390	U
207-08-9-----	Benzo(k)fluoranthene	390	U
50-32-8-----	Benzo(a)pyrene	390	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	390	U
53-70-3-----	Dibenzo(a,h)anthracene	390	U
191-24-2-----	Benzo(g,h,i)perylene	390	U

(1) - Cannot be separated from Diphenylamine

Handwritten: 563

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM176

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835274

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035274C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.2

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	390	U
111-44-4-----	bis(2-Chloroethyl) ether	390	U
95-57-8-----	2-Chlorophenol	390	U
541-73-1-----	1,3-Dichlorobenzene	390	U
106-46-7-----	1,4-Dichlorobenzene	390	U
95-50-1-----	1,2-Dichlorobenzene	390	U
95-48-7-----	2-Methylphenol	390	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5-----	4-Methylphenol	390	U
621-64-7-----	N-Nitroso-di-n-propylamine	390	U
67-72-1-----	Hexachloroethane	390	U
98-95-3-----	Nitrobenzene	390	U
78-59-1-----	Isophorone	390	U
88-75-5-----	2-Nitrophenol	390	U
105-67-9-----	2,4-Dimethylphenol	390	U
111-91-1-----	bis(2-Chloroethoxy) methane	390	U
120-83-2-----	2,4-Dichlorophenol	390	U
120-82-1-----	1,2,4-Trichlorobenzene	390	U
91-20-3-----	Naphthalene	390	U
106-47-8-----	4-Chloroaniline	390	U
87-68-3-----	Hexachlorobutadiene	390	U
59-50-7-----	4-Chloro-3-methylphenol	390	U
91-57-6-----	2-Methylnaphthalene	390	U
77-47-4-----	Hexachlorocyclopentadiene	390	U
88-06-2-----	2,4,6-Trichlorophenol	390	U
95-95-4-----	2,4,5-Trichlorophenol	980	U
91-58-7-----	2-Chloronaphthalene	390	U
88-74-4-----	2-Nitroaniline	980	U
131-11-3-----	Dimethylphthalate	390	U
208-96-8-----	Acenaphthylene	390	U
606-20-2-----	2,6-Dinitrotoluene	390	U
99-09-2-----	3-Nitroaniline	980	U
83-32-9-----	Acenaphthene	390	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM175

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835273

Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035273C64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	8200	JAB <i>R</i>
2.	UNKNOWN (BC)	4.71	370	JB <i>R</i>
3. 930-68-7	2-CYCLOHEXEN-1-ONE	5.71	85	NJ
4. 822-86-6	CYCLOHEXANE, 1,2-DICHLORO-	7.45	130	NJB <i>R</i>
5.	UNKNOWN CARBOXYLIC ACID	14.91	98	JAD
6.	UNKNOWN	16.08	94	J
7.	UNKNOWN	17.53	140	J
8.	UNKNOWN ALCOHOL	18.14	190	J
9.	UNKNOWN	23.21	180	J
10.	UNKNOWN	24.50	110	JN
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Signature
540

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM175

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835273

Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035273C64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	970	UJ
100-02-7-----	4-Nitrophenol	970	U
132-64-9-----	Dibenzofuran	390	U
121-14-2-----	2,4-Dinitrotoluene	390	U
84-66-2-----	Diethylphthalate	390	U
7005-72-3-----	4-Chlorophenyl-phenylether	390	U
86-73-7-----	Fluorene	390	U
100-01-6-----	4-Nitroaniline	970	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	970	U
86-30-6-----	N-nitrosodiphenylamine (1)	390	U
101-55-3-----	4-Bromophenyl-phenylether	390	U
118-74-1-----	Hexachlorobenzene	390	U
87-86-5-----	Pentachlorophenol	970	U
85-01-8-----	Phenanthrene	390	U
120-12-7-----	Anthracene	390	U
86-74-8-----	Carbazole	390	U
84-74-2-----	Di-n-butylphthalate	390	U
206-44-0-----	Fluoranthene	390	U
129-00-0-----	Pyrene	390	U
85-68-7-----	Butylbenzylphthalate	390	U
91-94-1-----	3,3'-Dichlorobenzidine	390	UJ
56-55-3-----	Benzo(a)anthracene	390	U
218-01-9-----	Chrysene	390	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	50	J
117-84-0-----	Di-n-octylphthalate	390	U
205-99-2-----	Benzo(b)fluoranthene	390	U
207-08-9-----	Benzo(k)fluoranthene	390	U
50-32-8-----	Benzo(a)pyrene	390	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	390	U
53-70-3-----	Dibenzo(a,h)anthracene	390	U
191-24-2-----	Benzo(g,h,i)perylene	390	U

(1) - Cannot be separated from Diphenylamine

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM175

Lab Name: COMPU-CHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835273
Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035273C64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	390	U
111-44-4-----	bis(2-Chloroethyl) ether	390	U
95-57-8-----	2-Chlorophenol	390	U
541-73-1-----	1,3-Dichlorobenzene	390	U
106-46-7-----	1,4-Dichlorobenzene	390	U
95-50-1-----	1,2-Dichlorobenzene	390	U
95-48-7-----	2-Methylphenol	390	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5-----	4-Methylphenol	390	U
621-64-7-----	N-Nitroso-di-n-propylamine	390	U
67-72-1-----	Hexachloroethane	390	U
98-95-3-----	Nitrobenzene	390	U
78-59-1-----	Isophorone	390	U
88-75-5-----	2-Nitrophenol	390	U
105-67-9-----	2,4-Dimethylphenol	390	U
111-91-1-----	bis(2-Chloroethoxy) methane	390	U
120-83-2-----	2,4-Dichlorophenol	390	U
120-82-1-----	1,2,4-Trichlorobenzene	390	U
91-20-3-----	Naphthalene	390	U
106-47-8-----	4-Chloroaniline	390	U
87-68-3-----	Hexachlorobutadiene	390	U
59-50-7-----	4-Chloro-3-methylphenol	390	U
91-57-6-----	2-Methylnaphthalene	390	U
77-47-4-----	Hexachlorocyclopentadiene	390	U
88-06-2-----	2,4,6-Trichlorophenol	390	U
95-95-4-----	2,4,5-Trichlorophenol	970	U
91-58-7-----	2-Chloronaphthalene	390	U
88-74-4-----	2-Nitroaniline	970	U
131-11-3-----	Dimethylphthalate	390	U
208-96-8-----	Acenaphthylene	390	U
606-20-2-----	2,6-Dinitrotoluene	390	U
99-09-2-----	3-Nitroaniline	970	U
83-32-9-----	Acenaphthene	390	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM174

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835272

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035272C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	5600	JAB R
2.	UNKNOWN (BC)	4.72	260	JB R
3. 822 86 6	CYCLOHEXANE, 1,2-DICHLORO	7.45	110	NJB R
4.	UNKNOWN	17.53	480	Jp
5.	UNKNOWN ALCOHOL	18.15	83	Jp
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM174

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835272

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035272C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N.

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

51-28-5-----	2,4-Dinitrophenol	980	UJ
100-02-7-----	4-Nitrophenol	980	U
132-64-9-----	Dibenzofuran	390	U
121-14-2-----	2,4-Dinitrotoluene	390	U
84-66-2-----	Diethylphthalate	390	U
7005-72-3-----	4-Chlorophenyl-phenylether	390	U
86-73-7-----	Fluorene	390	U
100-01-6-----	4-Nitroaniline	980	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	980	U
86-30-6-----	N-nitrosodiphenylamine (1)	390	U
101-55-3-----	4-Bromophenyl-phenylether	390	U
118-74-1-----	Hexachlorobenzene	390	U
87-86-5-----	Pentachlorophenol	980	U
85-01-8-----	Phenanthrene	390	U
120-12-7-----	Anthracene	390	U
86-74-8-----	Carbazole	390	U
84-74-2-----	Di-n-butylphthalate	390	U
206-44-0-----	Fluoranthene	390	U
129-00-0-----	Pyrene	390	U
85-68-7-----	Butylbenzylphthalate	390	U
91-94-1-----	3,3'-Dichlorobenzidine	390	UJ
56-55-3-----	Benzo(a)anthracene	390	U
218-01-9-----	Chrysene	390	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	61	J
117-84-0-----	Di-n-octylphthalate	390	U
205-99-2-----	Benzo(b)fluoranthene	390	U
207-08-9-----	Benzo(k)fluoranthene	390	U
50-32-8-----	Benzo(a)pyrene	390	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	390	U
53-70-3-----	Dibenzo(a,h)anthracene	390	U
191-24-2-----	Benzo(g,h,i)perylene	390	U

(1) - Cannot be separated from Diphenylamine

Handwritten signature and date: 12/31/96

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM174

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835272

Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035272C64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	390	U
111-44-4-----	bis(2-Chloroethyl) ether	390	U
95-57-8-----	2-Chlorophenol	390	U
541-73-1-----	1,3-Dichlorobenzene	390	U
106-46-7-----	1,4-Dichlorobenzene	390	U
95-50-1-----	1,2-Dichlorobenzene	390	U
95-48-7-----	2-Methylphenol	390	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	390	U
106-44-5-----	4-Methylphenol	390	U
621-64-7-----	N-Nitroso-di-n-propylamine	390	U
67-72-1-----	Hexachloroethane	390	U
98-95-3-----	Nitrobenzene	390	U
78-59-1-----	Isophorone	390	U
88-75-5-----	2-Nitrophenol	390	U
105-67-9-----	2,4-Dimethylphenol	390	U
111-91-1-----	bis(2-Chloroethoxy) methane	390	U
120-83-2-----	2,4-Dichlorophenol	390	U
120-82-1-----	1,2,4-Trichlorobenzene	390	U
91-20-3-----	Naphthalene	390	U
106-47-8-----	4-Chloroaniline	390	U
87-68-3-----	Hexachlorobutadiene	390	U
59-50-7-----	4-Chloro-3-methylphenol	390	U
91-57-6-----	2-Methylnaphthalene	390	U
77-47-4-----	Hexachlorocyclopentadiene	390	U
88-06-2-----	2,4,6-Trichlorophenol	390	U
95-95-4-----	2,4,5-Trichlorophenol	980	U
91-58-7-----	2-Chloronaphthalene	390	U
68-74-4-----	2-Nitroaniline	980	U
131-11-3-----	Dimethylphthalate	390	U
208-96-8-----	Acenaphthylene	390	U
606-20-2-----	2,6-Dinitrotoluene	390	U
99-09-2-----	3-Nitroaniline	980	U
83-32-9-----	Acenaphthene	390	U

recycled paper

recycled paper

FORM I SV-1

ecology and environment OLM03.0

ecology and environment

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM173

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835271

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035271C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	6100	JAB R
2.	UNKNOWN (BC)	4.71	250	JB R
3. 57-10-3	HEXADECANOIC ACID	14.91	330	NJ
4.	UNKNOWN	17.53	280	JW
5.	UNKNOWN	18.14	170	J
6.	UNKNOWN ALCOHOL	21.31	100	JV
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM173

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835271

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035271C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

51-28-5-----	2,4-Dinitrophenol	950	U
100-02-7-----	4-Nitrophenol	950	U
132-64-9-----	Dibenzofuran	380	U
121-14-2-----	2,4-Dinitrotoluene	47	J ✓
84-66-2-----	Diethylphthalate	380	U
7005-72-3-----	4-Chlorophenyl-phenylether	380	U
86-73-7-----	Fluorene	380	U
100-01-6-----	4-Nitroaniline	950	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	950	U
86-30-6-----	N-nitrosodiphenylamine (1)	380	U
101-55-3-----	4-Bromophenyl-phenylether	380	U
118-74-1-----	Hexachlorobenzene	380	U
87-86-5-----	Pentachlorophenol	950	U
85-01-8-----	Phenanthrene	380	U
120-12-7-----	Anthracene	380	U
86-74-8-----	Carbazole	380	U
84-74-2-----	Di-n-butylphthalate	380	U
206-44-0-----	Fluoranthene	380	U
129-00-0-----	Pyrene	54	J ✓
85-68-7-----	Butylbenzylphthalate	380	U
91-94-1-----	3,3'-Dichlorobenzidine	380	UJ
56-55-3-----	Benzo(a)anthracene	380	U
218-01-9-----	Chrysene	380	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	110	J ✓
117-84-0-----	Di-n-octylphthalate	380	U
205-99-2-----	Benzo(b)fluoranthene	380	U
207-08-9-----	Benzo(k)fluoranthene	380	U
50-32-8-----	Benzo(a)pyrene	380	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	380	U
53-70-3-----	Dibenzo(a,h)anthracene	380	U
191-24-2-----	Benzo(g,h,i)perylene	380	U

(1) - Cannot be separated from Diphenylamine

recycled paper

recycled paper

FORM I SV-2

ecology and environment OLM03.0

ecology and environment

494

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM173

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835271

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035271C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 13 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	74	J ✓
111-44-4-----	bis(2-Chloroethyl) ether	380	U
95-57-8-----	2-Chlorophenol	58	J ✓
541-73-1-----	1,3-Dichlorobenzene	380	U
106-46-7-----	1,4-Dichlorobenzene	380	U
95-50-1-----	1,2-Dichlorobenzene	380	U
95-48-7-----	2-Methylphenol	380	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	380	U
106-44-5-----	4-Methylphenol	380	U
621-64-7-----	N-Nitroso-di-n-propylamine	41	J ✓
67-72-1-----	Hexachloroethane	380	U
98-95-3-----	Nitrobenzene	380	U
78-59-1-----	Isophorone	380	U
88-75-5-----	2-Nitrophenol	380	U
105-67-9-----	2,4-Dimethylphenol	380	U
111-91-1-----	bis(2-Chloroethoxy) methane	380	U
120-83-2-----	2,4-Dichlorophenol	380	U
120-82-1-----	1,2,4-Trichlorobenzene	39	J ✓
91-20-3-----	Naphthalene	380	U
106-47-8-----	4-Chloroaniline	380	U
87-68-3-----	Hexachlorobutadiene	380	U
59-50-7-----	4-Chloro-3-methylphenol	64	J ✓
91-57-6-----	2-Methylnaphthalene	380	U
77-47-4-----	Hexachlorocyclopentadiene	380	U
88-06-2-----	2,4,6-Trichlorophenol	380	U
95-95-4-----	2,4,5-Trichlorophenol	950	U
91-58-7-----	2-Chloronaphthalene	380	U
88-74-4-----	2-Nitroaniline	950	U
131-11-3-----	Dimethylphthalate	380	U
208-96-8-----	Acenaphthylene	380	U
606-20-2-----	2,6-Dinitrotoluene	380	U
99-09-2-----	3-Nitroaniline	950	U
83-32-9-----	Acenaphthene	48	J ✓

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM172

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835270

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035270A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.8

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.41	6100	JAB R
2.	UNKNOWN (BC)	4.64	390	JB R
3. 930-68-7	2-CYCLOHEXEN-1-ONE	5.63	83	NJ
4.	UNKNOWN	17.45	580	JN
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM172

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835270
Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035270A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.8

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
51-28-5-----	2,4-Dinitrophenol	910	UJ
100-02-7-----	4-Nitrophenol	910	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	360	U
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	910	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	910	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	910	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	360	U
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	UJ
56-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	59	J
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM172

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835270

Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035270A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q.

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy) methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	910	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	910	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	910	U
83-32-9-----	Acenaphthene	360	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM171

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835269

Sample wt/vol: 30.0 (g/mL) g

Lab File ID: GH035269A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 11 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.5

CONCENTRATION UNITS:

Number TICs found: 5

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.40	5200	JAB R
2.	UNKNOWN (BC)	4.63	500	JB R
3. 822-67-3	2-CYCLOHEXEN-1-OL	5.06	95	NJ
4. 930-68-7	2-CYCLOHEXEN-1-ONE	5.64	86	NJ
5. 822-86-6	CYCLOHEXANE, 1,2-DICHLORO	7.38	110	NJB R
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC

OLM03.0

453

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM171

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835269
Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035269A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 11 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	930	UJ
100-02-7-----	4-Nitrophenol	930	U
132-64-9-----	Dibenzofuran	370	U
121-14-2-----	2,4-Dinitrotoluene	370	U
84-66-2-----	Diethylphthalate	370	U
7005-72-3-----	4-Chlorophenyl-phenylether	370	U
86-73-7-----	Fluorene	370	U
100-01-6-----	4-Nitroaniline	930	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	930	U
86-30-6-----	N-nitrosodiphenylamine (1)	370	U
101-55-3-----	4-Bromophenyl-phenylether	370	U
118-74-1-----	Hexachlorobenzene	370	U
87-86-5-----	Pentachlorophenol	930	U
85-01-8-----	Phenanthrene	370	U
120-12-7-----	Anthracene	370	U
86-74-8-----	Carbazole	370	U
84-74-2-----	Di-n-butylphthalate	370	U
206-44-0-----	Fluoranthene	370	U
129-00-0-----	Pyrene	370	U
85-68-7-----	Butylbenzylphthalate	370	U
91-94-1-----	3,3'-Dichlorobenzidine	370	UJ
56-55-3-----	Benzo(a)anthracene	370	U
218-01-9-----	Chrysene	370	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	67	J
117-84-0-----	Di-n-octylphthalate	370	U
205-99-2-----	Benzo(b)fluoranthene	370	U
207-08-9-----	Benzo(k)fluoranthene	370	U
50-32-8-----	Benzo(a)pyrene	370	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	370	U
53-70-3-----	Dibenzo(a,h)anthracene	370	U
191-24-2-----	Benzo(g,h,i)perylene	370	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM171

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835269
Sample wt/vol: 30.0 (g/mL) g Lab File ID: GH035269A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 11 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy) methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	930	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	930	U
131-11-3	Dimethylphthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	930	U
83-32-9	Acenaphthene	370	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM170

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835268

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035268A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.9

Number TICs found: 8

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.41	6300	JAB- <i>l</i>
2.	UNKNOWN (BC)	4.64	430	JB <i>l</i>
3. 822-67-3	2-CYCLOHEXEN-1-OL	5.06	80	NJ
4. 930-68-7	2-CYCLOHEXEN-1-ONE	5.63	77	NJ
5. 822-86-6	CYCLOHEXANE, 1,2-DICHLORO	7.37	150	NJB <i>l</i>
6.	UNKNOWN CARBOXYLIC ACID	14.83	76	JA
7.	UNKNOWN	17.45	150	J
8.	UNKNOWN	23.01	130	J
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM170

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835268

Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035268A64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO. COMPOUND Q

51-28-5-----	2,4-Dinitrophenol	910	UJ
100-02-7-----	4-Nitrophenol	910	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	360	U
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	910	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	910	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	910	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	360	U
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	UJ
56-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	56	J
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM170

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835268

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035268A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----Phenol	360	U
111-44-4-----bis(2-Chloroethyl)ether	360	U
95-57-8-----2-Chlorophenol	360	U
541-73-1-----1,3-Dichlorobenzene	360	U
106-46-7-----1,4-Dichlorobenzene	360	U
95-50-1-----1,2-Dichlorobenzene	360	U
95-48-7-----2-Methylphenol	360	U
108-60-1-----2,2'-oxybis(1-Chloropropane)	360	U
106-44-5-----4-Methylphenol	360	U
621-64-7-----N-Nitroso-di-n-propylamine	360	U
67-72-1-----Hexachloroethane	360	U
98-95-3-----Nitrobenzene	360	U
78-59-1-----Isophorone	360	U
88-75-5-----2-Nitrophenol	360	U
105-67-9-----2,4-Dimethylphenol	360	U
111-91-1-----bis(2-Chloroethoxy)methane	360	U
120-83-2-----2,4-Dichlorophenol	360	U
120-82-1-----1,2,4-Trichlorobenzene	360	U
91-20-3-----Naphthalene	360	U
106-47-8-----4-Chloroaniline	360	U
87-68-3-----Hexachlorobutadiene	360	U
59-50-7-----4-Chloro-3-methylphenol	360	U
91-57-6-----2-Methylnaphthalene	360	U
77-47-4-----Hexachlorocyclopentadiene	360	U
88-06-2-----2,4,6-Trichlorophenol	360	U
95-95-4-----2,4,5-Trichlorophenol	910	U
91-58-7-----2-Chloronaphthalene	360	U
88-74-4-----2-Nitroaniline	910	U
131-11-3-----Dimethylphthalate	360	U
208-96-8-----Acenaphthylene	360	U
606-20-2-----2,6-Dinitrotoluene	360	U
99-09-2-----3-Nitroaniline	910	U
83-32-9-----Acenaphthene	360	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM168

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835267

Sample wt/vol: 30.2 (g/mL) g

Lab File ID: GH035267C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.49	7100	JAB R
2.	UNKNOWN (BC)	4.71	470	JB R
3. 822-67-3	2-CYCLOHEXEN-1-OL	5.14	84	NJ
4. 930-68-7	2-CYCLOHEXEN-1-ONE	5.71	110	NJ
5.	UNKNOWN	17.52	530	JN
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM168

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835267

Sample wt/vol: 30.2 (g/mL) g Lab File ID: GH035267C64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	910	UJ
100-02-7-----	4-Nitrophenol	910	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	360	U
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	910	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	910	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	910	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	360	U
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	UJ
56-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	49	J
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM168

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835267
Sample wt/vol: 30.2 (g/mL) g Lab File ID: GH035267C64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy) methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	910	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	910	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	910	U
83-32-9-----	Acenaphthene	360	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM167

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835266

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035266C64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.1

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL (BC)	4.50	7500	JAB R
2.	UNKNOWN (BC)	4.71	410	JB R
3. 822-67-3	2-CYCLOHEXEN-1-OL	5.14	81	NJ
4. 930-68-7	2-CYCLOHEXEN-1-ONE	5.71	98	NJ
5. 822-85-5	CYCLOHEXANE, 1,2-DICHLORO	7.45	110	NJB R
6.	UNKNOWN	17.52	140	JD
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM167

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835266
Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035266C64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

51-28-5-----	2,4-Dinitrophenol	910	UJ
100-02-7-----	4-Nitrophenol	910	U
132-64-9-----	Dibenzofuran	360	U
121-14-2-----	2,4-Dinitrotoluene	360	U
84-66-2-----	Diethylphthalate	360	U
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	910	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	910	U
86-30-6-----	N-nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenyl-phenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	910	U
85-01-8-----	Phenanthrene	360	U
120-12-7-----	Anthracene	360	U
86-74-8-----	Carbazole	360	U
84-74-2-----	Di-n-butylphthalate	360	U
206-44-0-----	Fluoranthene	360	U
129-00-0-----	Pyrene	360	U
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	UJ
56-55-3-----	Benzo(a)anthracene	360	U
218-01-9-----	Chrysene	360	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	360	U
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	360	U
207-08-9-----	Benzo(k)fluoranthene	360	U
50-32-8-----	Benzo(a)pyrene	360	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	360	U
53-70-3-----	Dibenzo(a,h)anthracene	360	U
191-24-2-----	Benzo(g,h,i)perylene	360	U

(1) - Cannot be separated from Diphenylamine

[Handwritten signature]
40

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM167

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009

Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166

Matrix: (soil/water) SOIL Lab Sample ID: 835266

Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035266C64

Level: (low/med) LOW Date Received: 12/21/96

% Moisture: 9 decanted: (Y/N) N Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-oxybis(1-Chloropropane)	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy) methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM166

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835257

Sample wt/vol: 30.1 (g/mL) g

Lab File ID: GH035257A64

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: 12 decanted: (Y/N) N

Date Extracted: 12/23/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 12/30/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.7

CONCENTRATION UNITS:

Number TICs found: 6

(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	NEOL (BC)	4.41	5700	JAB R
2.	UNKNOWN (BC)	4.64	390	JB R
3. 822-67-3	2-CYCLOHEXEN-1-OL	5.06	79	NJ
4. 930-68-7	2-CYCLOHEXEN-1-ONE	5.63	82	NJ
5. 822-66-6	CYCLOHEXANE, 1,2 DICHLORO	7.37	88	NJB R
6.	UNKNOWN	17.45	470	JN
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Handwritten: 12/15/97 377

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM166

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835257
Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035257A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 12 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
51-28-5-----	2,4-Dinitrophenol	940	UJ
100-02-7-----	4-Nitrophenol	940	U
132-64-9-----	Dibenzofuran	370	U
121-14-2-----	2,4-Dinitrotoluene	370	U
84-66-2-----	Diethylphthalate	370	U
7005-72-3-----	4-Chlorophenyl-phenylether	370	U
86-73-7-----	Fluorene	370	U
100-01-6-----	4-Nitroaniline	940	UJ
534-52-1-----	4,6-Dinitro-2-methylphenol	940	U
86-30-6-----	N-nitrosodiphenylamine (1)	370	U
101-55-3-----	4-Bromophenyl-phenylether	370	U
118-74-1-----	Hexachlorobenzene	370	U
87-86-5-----	Pentachlorophenol	940	U
85-01-8-----	Phenanthrene	370	U
120-12-7-----	Anthracene	370	U
86-74-8-----	Carbazole	370	U
84-74-2-----	Di-n-butylphthalate	370	U
206-44-0-----	Fluoranthene	370	U
129-00-0-----	Pyrene	370	U
85-68-7-----	Butylbenzylphthalate	370	U
91-94-1-----	3,3'-Dichlorobenzidine	370	UJ
56-55-3-----	Benzo(a)anthracene	370	U
218-01-9-----	Chrysene	370	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	52	J
117-84-0-----	Di-n-octylphthalate	370	U
205-99-2-----	Benzo(b)fluoranthene	370	U
207-08-9-----	Benzo(k)fluoranthene	370	U
50-32-8-----	Benzo(a)pyrene	370	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	370	U
53-70-3-----	Dibenzo(a,h)anthracene	370	U
191-24-2-----	Benzo(g,h,i)perylene	370	U

(1) - Cannot be separated from Diphenylamine

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM166

Lab Name: COMPUCHEM ENV. CORP. Contract: 68D50009
Lab Code: COMPU Case No.: 25253 SAS No.: SDG No.: JM166
Matrix: (soil/water) SOIL Lab Sample ID: 835257
Sample wt/vol: 30.1 (g/mL) g Lab File ID: GH035257A64
Level: (low/med) LOW Date Received: 12/21/96
% Moisture: 12 decanted: (Y/N) N Date Extracted: 12/23/96
Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/30/96
Injection Volume: 2.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

108-95-2-----	Phenol	370	U
111-44-4-----	bis(2-Chloroethyl) ether	370	U
95-57-8-----	2-Chlorophenol	370	U
541-73-1-----	1,3-Dichlorobenzene	370	U
106-46-7-----	1,4-Dichlorobenzene	370	U
95-50-1-----	1,2-Dichlorobenzene	370	U
95-48-7-----	2-Methylphenol	370	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	370	U
106-44-5-----	4-Methylphenol	370	U
621-64-7-----	N-Nitroso-di-n-propylamine	370	U
67-72-1-----	Hexachloroethane	370	U
98-95-3-----	Nitrobenzene	370	U
78-59-1-----	Isophorone	370	U
88-75-5-----	2-Nitrophenol	370	U
105-67-9-----	2,4-Dimethylphenol	370	U
111-91-1-----	bis(2-Chloroethoxy) methane	370	U
120-83-2-----	2,4-Dichlorophenol	370	U
120-82-1-----	1,2,4-Trichlorobenzene	370	U
91-20-3-----	Naphthalene	370	U
106-47-8-----	4-Chloroaniline	370	U
87-68-3-----	Hexachlorobutadiene	370	U
59-50-7-----	4-Chloro-3-methylphenol	370	U
91-57-6-----	2-Methylnaphthalene	370	U
77-47-4-----	Hexachlorocyclopentadiene	370	U
88-06-2-----	2,4,6-Trichlorophenol	370	U
95-95-4-----	2,4,5-Trichlorophenol	940	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	940	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	940	U
83-32-9-----	Acenaphthene	370	U

[Signature] 375

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM198

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835284

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035284C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.04	14	JB R
2.	LABORATORY ARTIFACT	16.54	47	J
3.	LABORATORY ARTIFACT	19.21	18	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment
ecology and environment

ecology and environment

OLM03.0

236

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM198

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835284

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035284C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9.

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	8 4
67-64-1-----	Acetone	11	8 4
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM197

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835283

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035283C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 16

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.87	18	JB R
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment
ecology and environment
12/15/99 OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM197

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835283

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035283C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 16

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	12	U
74-83-9-----	Bromomethane	12	U
75-01-4-----	Vinyl Chloride	12	U
75-00-3-----	Chloroethane	12	U
75-09-2-----	Methylene Chloride	12	U
67-64-1-----	Acetone	12	U
75-15-0-----	Carbon Disulfide	12	U
75-35-4-----	1,1-Dichloroethene	12	U
75-34-3-----	1,1-Dichloroethane	12	U
540-59-0-----	1,2-Dichloroethene (total)	12	U
67-66-3-----	Chloroform	12	U
107-06-2-----	1,2-Dichloroethane	12	U
78-93-3-----	2-Butanone	12	U
71-55-6-----	1,1,1-Trichloroethane	12	U
56-23-5-----	Carbon Tetrachloride	12	U
75-27-4-----	Bromodichloromethane	12	U
78-87-5-----	1,2-Dichloropropane	12	U
10061-01-5-----	cis-1,3-Dichloropropene	12	U
79-01-6-----	Trichloroethene	12	U
124-48-1-----	Dibromochloromethane	12	U
79-00-5-----	1,1,2-Trichloroethane	12	U
71-43-2-----	Benzene	12	U
10061-02-6-----	trans-1,3-Dichloropropene	12	U
75-25-2-----	Bromoform	12	U
108-10-1-----	4-Methyl-2-Pentanone	12	U
591-78-6-----	2-Hexanone	12	U
127-18-4-----	Tetrachloroethene	12	U
79-34-5-----	1,1,2,2-Tetrachloroethane	12	U
108-88-3-----	Toluene	12	U
108-90-7-----	Chlorobenzene	12	U
100-41-4-----	Ethylbenzene	12	U
100-42-5-----	Styrene	12	U
1330-20-7-----	Xylene (Total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM196

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835282

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035282C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 11

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.00	16	JB R
2.	LABORATORY ARTIFACT	16.55	7	J R
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment
ecology and environment
OLM03.0
213

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM196

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835282

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035282C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 11

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NO.

COMPOUND

Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	12	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM195

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835281

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035281C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 11

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	10	JB R
2.	LABORATORY ARTIFACT	16.52	13	J ↓
3.	LABORATORY ARTIFACT	19.20	9	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment

ecology and environment

OLM03.0

100

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM195

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835281

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035281C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 11

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	4 8 4
67-64-1-----	Acetone	11	8 4 4 5
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM194

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835280

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035280C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 21

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.87	37 JB	R
2.	LABORATORY ARTIFACT	16.56	12 J	↓
3.	LABORATORY ARTIFACT	19.24	8 J	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

12/16/97
ecology and environment
ecology and environment
OLM03.0
185

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM194

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835280

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035280C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 21

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	13	U
74-83-9-----	Bromomethane	13	U
75-01-4-----	Vinyl Chloride	13	U
75-00-3-----	Chloroethane	13	U
75-09-2-----	Methylene Chloride	13	U
67-64-1-----	Acetone	13	U
75-15-0-----	Carbon Disulfide	13	U
75-35-4-----	1,1-Dichloroethene	13	U
75-34-3-----	1,1-Dichloroethane	13	U
540-59-0-----	1,2-Dichloroethene (total)	13	U
67-66-3-----	Chloroform	13	U
107-06-2-----	1,2-Dichloroethane	13	U
78-93-3-----	2-Butanone	13	U
71-55-6-----	1,1,1-Trichloroethane	13	U
56-23-5-----	Carbon Tetrachloride	13	U
75-27-4-----	Bromodichloromethane	13	U
78-87-5-----	1,2-Dichloropropane	13	U
10061-01-5-----	cis-1,3-Dichloropropene	13	U
79-01-6-----	Trichloroethene	13	U
124-48-1-----	Dibromochloromethane	13	U
79-00-5-----	1,1,2-Trichloroethane	13	U
71-43-2-----	Benzene	13	U
10061-02-6-----	trans-1,3-Dichloropropene	13	U
75-25-2-----	Bromoform	13	U
108-10-1-----	4-Methyl-2-Pentanone	13	U
591-78-6-----	2-Hexanone	13	U
127-18-4-----	Tetrachloroethene	13	U
79-34-5-----	1,1,2,2-Tetrachloroethane	13	U
108-88-3-----	Toluene	13	U
108-90-7-----	Chlorobenzene	13	U
100-41-4-----	Ethylbenzene	13	U
100-42-5-----	Styrene	13	U
1330-20-7-----	Xylene (Total)	13	U

FORM I VOA

OLM03.0

184

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM178

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835276

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035276C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 12

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.84	1.4	JB R
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

01/15/97
ecology and environment
ecology and environment
OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM178

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835276

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035276C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 12

Date Analyzed: 12/24/96

GC Column: DB524

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	X 2 2 4
67-64-1-----	Acetone	11	UJ
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM177

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835275

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035275C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.88	41	JB R
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment

ecology and environment

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM177

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835275

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035275C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	-----Chloromethane	11	U
74-83-9	-----Bromomethane	11	U
75-01-4	-----Vinyl Chloride	11	U
75-00-3	-----Chloroethane	11	U
75-09-2	-----Methylene Chloride	11	U
67-64-1	-----Acetone	11	U
75-15-0	-----Carbon Disulfide	11	U
75-35-4	-----1,1-Dichloroethene	11	U
75-34-3	-----1,1-Dichloroethane	11	U
540-59-0	-----1,2-Dichloroethene (total)	11	U
67-66-3	-----Chloroform	11	U
107-06-2	-----1,2-Dichloroethane	11	U
78-93-3	-----2-Butanone	11	U
71-55-6	-----1,1,1-Trichloroethane	11	U
56-23-5	-----Carbon Tetrachloride	11	U
75-27-4	-----Bromodichloromethane	11	U
78-87-5	-----1,2-Dichloropropane	11	U
10061-01-5	-----cis-1,3-Dichloropropene	11	U
79-01-6	-----Trichloroethene	11	U
124-48-1	-----Dibromochloromethane	11	U
79-00-5	-----1,1,2-Trichloroethane	11	U
71-43-2	-----Benzene	11	U
10061-02-6	-----trans-1,3-Dichloropropene	11	U
75-25-2	-----Bromoform	11	U
108-10-1	-----4-Methyl-2-Pentanone	11	U
591-78-6	-----2-Hexanone	11	U
127-18-4	-----Tetrachloroethene	11	U
79-34-5	-----1,1,2,2-Tetrachloroethane	11	U
108-88-3	-----Toluene	11	U
108-90-7	-----Chlorobenzene	11	U
100-41-4	-----Ethylbenzene	11	U
100-42-5	-----Styrene	11	U
1330-20-7	-----Xylene (Total)	11	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM176

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835274

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035274C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 15

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.	CO2 (NOT IN TIC TOTAL)	0.87	38	JB R
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment

OLM03.0

ecology and environment

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM176

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835274

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035274C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 15

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	-----Chloromethane	12	U
74-83-9	-----Bromomethane	12	U
75-01-4	-----Vinyl Chloride	12	U
75-00-3	-----Chloroethane	12	U
75-09-2	-----Methylene Chloride	12	U
67-64-1	-----Acetone	12	UJ
75-15-0	-----Carbon Disulfide	12	U
75-35-4	-----1,1-Dichloroethene	12	U
75-34-3	-----1,1-Dichloroethane	12	U
540-59-0	-----1,2-Dichloroethene (total)	12	U
67-66-3	-----Chloroform	12	U
107-06-2	-----1,2-Dichloroethane	12	U
78-93-3	-----2-Butanone	12	U
71-55-6	-----1,1,1-Trichloroethane	12	U
56-23-5	-----Carbon Tetrachloride	12	U
75-27-4	-----Bromodichloromethane	12	U
78-87-5	-----1,2-Dichloropropane	12	U
10061-01-5	-----cis-1,3-Dichloropropene	12	U
79-01-6	-----Trichloroethene	12	U
124-48-1	-----Dibromochloromethane	12	U
79-00-5	-----1,1,2-Trichloroethane	12	U
71-43-2	-----Benzene	12	U
10061-02-6	-----trans-1,3-Dichloropropene	12	U
75-25-2	-----Bromoform	12	U
108-10-1	-----4-Methyl-2-Pentanone	12	U
591-78-6	-----2-Hexanone	12	U
127-18-4	-----Tetrachloroethene	12	U
79-34-5	-----1,1,2,2-Tetrachloroethane	12	U
108-88-3	-----Toluene	12	U
108-90-7	-----Chlorobenzene	12	U
100-41-4	-----Ethylbenzene	12	U
100-42-5	-----Styrene	12	U
1330-20-7	-----Xylene (Total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM175

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835273

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035273C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 15

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.87	26	JB
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I VOA-TIC

recycled paper

recycled paper

ecology and environment
ecology and environment
OLM03.0
143

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM175

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835273

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035273C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 15

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM174

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835272

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035272C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 15

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.86	27	JB R
2.	LABORATORY ARTIFACT	19.23	16	J R
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM174

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835272

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035272C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 15

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	12	U
74-83-9-----	Bromomethane	12	U
75-01-4-----	Vinyl Chloride	12	U
75-00-3-----	Chloroethane	12	U
75-09-2-----	Methylene Chloride	12	U
67-64-1-----	Acetone	18	U
75-15-0-----	Carbon Disulfide	12	U
75-35-4-----	1,1-Dichloroethene	12	U
75-34-3-----	1,1-Dichloroethane	12	U
540-59-0-----	1,2-Dichloroethene (total)	12	U
67-66-3-----	Chloroform	12	U
107-06-2-----	1,2-Dichloroethane	12	U
78-93-3-----	2-Butanone	12	U
71-55-6-----	1,1,1-Trichloroethane	12	U
56-23-5-----	Carbon Tetrachloride	12	U
75-27-4-----	Bromodichloromethane	12	U
78-87-5-----	1,2-Dichloropropane	12	U
10061-01-5-----	cis-1,3-Dichloropropene	12	U
79-01-6-----	Trichloroethene	12	U
124-48-1-----	Dibromochloromethane	12	U
79-00-5-----	1,1,2-Trichloroethane	12	U
71-43-2-----	Benzene	12	U
10061-02-6-----	trans-1,3-Dichloropropene	12	U
75-25-2-----	Bromoform	12	U
108-10-1-----	4-Methyl-2-Pentanone	12	U
591-78-6-----	2-Hexanone	12	U
127-18-4-----	Tetrachloroethene	12	U
79-34-5-----	1,1,2,2-Tetrachloroethane	12	U
108-88-3-----	Toluene	12	U
108-90-7-----	Chlorobenzene	12	U
100-41-4-----	Ethylbenzene	12	U
100-42-5-----	Styrene	12	U
1330-20-7-----	Xylene (Total)	12	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM173

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835271

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035271C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.86	31	JB
2.	LABORATORY ARTIFACT	16.54	7	J
3.	LABORATORY ARTIFACT	19.23	8	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM173

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835271

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035271C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 13

Date Analyzed: 12/24/96

GC Column: DB624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
67-64-1-----	Acetone	13	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U

11.6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JM172

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835270

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035270C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CO2 (NOT IN TIC TOTAL)	0.83	14	JB
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JM172

Lab Name: COMPUCHEM ENV. CORP.

Contract: 68D50009

Lab Code: COMPU

Case No.: 25253

SAS No.:

SDG No.: JM166

Matrix: (soil/water) SOIL

Lab Sample ID: 835270

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: GH035270C51

Level: (low/med) LOW

Date Received: 12/21/96

% Moisture: not dec. 9

Date Analyzed: 12/24/96

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
---------	----------	---	---

74-87-3-----	Chloromethane	11	U
74-83-9-----	Bromomethane	11	U
75-01-4-----	Vinyl Chloride	11	U
75-00-3-----	Chloroethane	11	U
75-09-2-----	Methylene Chloride	11	U
57-64-1-----	Acetone	11	U
75-15-0-----	Carbon Disulfide	11	U
75-35-4-----	1,1-Dichloroethene	11	U
75-34-3-----	1,1-Dichloroethane	11	U
540-59-0-----	1,2-Dichloroethene (total)	11	U
67-66-3-----	Chloroform	11	U
107-06-2-----	1,2-Dichloroethane	11	U
78-93-3-----	2-Butanone	11	U
71-55-6-----	1,1,1-Trichloroethane	11	U
56-23-5-----	Carbon Tetrachloride	11	U
75-27-4-----	Bromodichloromethane	11	U
78-87-5-----	1,2-Dichloropropane	11	U
10061-01-5-----	cis-1,3-Dichloropropene	11	U
79-01-6-----	Trichloroethene	11	U
124-48-1-----	Dibromochloromethane	11	U
79-00-5-----	1,1,2-Trichloroethane	11	U
71-43-2-----	Benzene	11	U
10061-02-6-----	trans-1,3-Dichloropropene	11	U
75-25-2-----	Bromoform	11	U
108-10-1-----	4-Methyl-2-Pentanone	11	U
591-78-6-----	2-Hexanone	11	U
127-18-4-----	Tetrachloroethene	11	U
79-34-5-----	1,1,2,2-Tetrachloroethane	11	U
108-88-3-----	Toluene	11	U
108-90-7-----	Chlorobenzene	11	U
100-41-4-----	Ethylbenzene	11	U
100-42-5-----	Styrene	11	U
1330-20-7-----	Xylene (Total)	11	U



United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No.
(if applicable)

Case No.

25253

1. Project Code TEC-660A		Account Code 911TIO/FAX 1022 L AOC		2. Region No. 10		Sampling Co. E+E		4. Date Shipped 12-20-96		Carrier Airborne Express		6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Other (Specify) 6. Ice only N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)		
Regional Information				Sampler (Name) Mike Martin				Airbill Number 6667-05524								
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To Campuchem Environmental 4600 Silicon Drive Research Triangle Park, NC 27709 ATTN: Richard Blum 919-474-7033								
Site Name				3. Type of Activity SF <input type="checkbox"/> PRP <input type="checkbox"/> ST <input type="checkbox"/> FED <input type="checkbox"/> Lead <input type="checkbox"/> Pre-Remedial <input type="checkbox"/> PA <input type="checkbox"/> SSI <input type="checkbox"/> LSI <input type="checkbox"/> Remedial <input type="checkbox"/> RD <input type="checkbox"/> RA <input type="checkbox"/> O&M <input type="checkbox"/> NPLD <input type="checkbox"/> Removal <input type="checkbox"/> CLEM <input type="checkbox"/> REMA <input type="checkbox"/> REM <input type="checkbox"/> OIL <input type="checkbox"/> UST <input type="checkbox"/>												
City, State		Site Spill ID														
CLP Sample Numbers (from labels)		A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis VOA BNA Post/PCB High only ARO/TOX				F Regional Specific Tracking Number or Tag Numbers		G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform, Eval. -- = Not a QC Sample
JM 207		5	L	G	6						96514737	GP-15-4	12/18/96/1115	mm		
JM 179											96514744	GP-18-8	12/18/96/1435			
JM 179											965147	GP-11-7				
JM 193											9651451	GP-11-7	12/17/96/1535	mm		
JM 200											9651422	GP-8B-2	12/17/96/1330			
JM 173											9651473	GP-12-B-7	12/18/96/920			
JM 191											9651453	GP-9-7	12/17/96/1300			
JM 177											9651446	GP-16-9	12/18/96/1200			
JM 176											9651438	GP-15-8	12/18/96/1130			
Shipment for Case complete? (Y/N)		Page 1 of		Sample used for a spike and/or duplicate				Additional Sampler Signatures				Chain of Custody Seal Number				

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) <i>Mark Kozlowski</i>	Date / Time 12-20-96/1500	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)

☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No.
(il aplicable)

Case No.

25253

1. Project Code TEC-0804		Account Code 97710 PFA 1022 LADD		2. Region No. 10		Sampling Co. E+E		4. Date Shipped 12-20-96		Carrier Airborne		6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Other (Specify) 6. Ice only N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinse 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)	
Regional Information				Sampler (Name) Mike Martin				Airbill Number 4208 990273							
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To Commod Environmental 4600 Silicon Drive Research Triangle Park, NC 27709 ATTN: Richard Bloom							
Site Name				3. Type of Activity SF <input type="checkbox"/> Lead <input type="checkbox"/> Remedial <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>											
City, State		Site Spill ID													
CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis VOA BNA Pos/PCB High only ARO/TOX				F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform Eval. -- = Not a QC Sample	
JM 165	5	low			1	1			96514 711	GP-3-Z	12-16-96 1316	JM			
JM 206	1	1			1	1			96514 735	GP-14-Z	12-16-96 1050				
JM 169	1	1			1				96514 717	GP-5A-7	12-17-96 1000				
JM 170	1	1			1				96514 719	GP-6A-7	12-17-96 1120				
JM 197	1	1				1			96514 716	GP-5B-Z	12-17-96 1000				
JM 171	1	1							96514 718						
Shipment for Case complete? (Y/N)		Page 1 of		Sample used for a spike and/or duplicate				Additional Sampler Signatures				Chain of Custody Seal Number			

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
<i>[Signature]</i>	12/20/06 1845				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

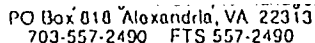
EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)☐ Declinedrecycled paper
recycled paper

Ecology and Environment



המחלקה

25253

[illegible]

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time <i>4/20/06 1600</i>	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-2 (Rev. 3-81) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:
Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0344335

13



Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No.
(If applicable)

Case No.

25253

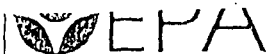
1. Project Code TEC-680A	Account Code 97-TW-PAKICEZL-100	2. Region No. 10	Sampling Co. E+E	4. Date Shipped 12-20-96	Carrier Airborne Express	6. Preservative (Enter in Column D) 1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved	7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinseate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)				
Regional Information		Sampler (Name) Mike Martin		Airbill Number 666 705524							
Non-Superfund Program		Sampler Signature <i>[Signature]</i>		5. Ship To Compchem Env.							
Site Name Mike		3. Type of Activity Remedial Removal SF <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>		4600 Silicon Drive Research Triangle Park, NC 27709 ATTN: Richard Bloom 919-474-7033							
City, State	Site Spill ID										
CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp/Grab	D Preservative from Box 6	E RAS Analysis VOA BNA Pest/PCB High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform. Eval. — = Not a QC Sample
JM190	2	Low	Grab	6	3 3	96514705	DW 6	12/19/96	mm	MM863	
Shipment for Case complete? (Y/N)											
Page 1 of		Sample used for a spike and/or duplicate				Additional Sampler Signatures		Chain of Custody Seal Number			

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 12/20/96 1600	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS



Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No.
(If applicable)

Case No.

25253

1. Project Code TEC 680A		Account Code 91101PAX 10221A00		2. Region No. 10 Sampling Co. E+E		4. Date Shipped 12/20/96 Carrier Airborne		6. Preservative (Enter in Column D) 1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinse 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)			
Regional Information				Sampler (Name) MILK MARTIN		Airbill Number 666905524							
Non-Superfund Program				Sampler Signature <i>[Signature]</i>		5. Ship to Compuchem ENVIRONMENTAL 4600 SILICON DRIVE RESEARCH TRIANGLE PARK NC 27709 919 ATTN: Richard Bloom 4747033							
Site Name				3. Type of Activity SF <input type="checkbox"/> Load <input type="checkbox"/> Pro. <input type="checkbox"/> Remedial <input type="checkbox"/> Removal <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RO <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>									
City, State		Site Spill ID											
CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis VOA BNA PosV PCB High only ARO/TOX			Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field OC B = Blank S = Spike D = Duplicate PE = Perform Eval. -- = Not a OC Sample
JM209	5	L	G	6			1	96S14742	GP-17-9	12/18/96 1340	mm		
JM178							2	96S14741	GP-17-2	12/15/96 1300			MSD
JM208							1	96S14739	GP-16-2	12/18/96 1145			
JM192							1	96S14749	GP-10-7	12/18/96 1820			
JM202							1	96S14748	GP-10-2	12/17/96 1510			
JM179							1	96S14744	GP-18-8	12/18/96 1438			
JM210							1	96S14743	GP-18-4	12/18/96 1405			
Shipment for Case complete? (Y/N)		Page 2 of 2		Sample used for a spike and/or duplicate				Additional Sampler Signatures			Chain of Custody Seal Number		

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 12/20/96 1600	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)

☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

25253

1. Project Code TEC680A		Account Code 977PA-AX 10221400		2. Region No. 10		Sampling Co. E-C		4. Date Shipped 12/10/96		Carrier Curberne		6. Preservative (Enter in Column D)		7. Sample Description (Enter in Column A)			
Regional Information				Sampler (Name) MIKE MARTIN				Airbill Number 666705524				1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved		1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)			
Non-Superfund Program				Sampler Signature 				5. Ship To Compuchem ENVIRONMENTAL 4600 SILICON DRIVE RESEARCH TRIANGLE PARK NC 27709 919 ATTN: Rickana Bloom 4747033									
Site Name				3. Type of Activity													
County, State				Site Spill ID				3. Type of Activity Lead Remedial Removal SF <input type="checkbox"/> PA <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>									
CLP Sample Numbers (from labels)		A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./ Grab	D Preservative from Box 6	E RAS Analysis			Regional Specific Tracking Number or Tag Numbers		Station Location Number		H Mo/Day/Year/Time Sample Collection		I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field OC
						VOA	BNA	Pest/PCB	High only ARO/TOX								B = Blank S = Spike D = Duplicate PE = Perform. Eval. — = Not a OC Sample
JM194		5	L	G	6			1		707	GP-1-4	12/16/96					
JM167								1		712	GP-3-7	12/16/96 1530					
JM166								1		708	GP-1-7	12/16/96 1110					
JM195								1		711	GP-3-2	12/16/96 1510					
JM203								1		715	GP-4-7	12/16/96 1615					
JM203								1		750	GP-11-2	12/17/96 1525					
JM196								1		714	GP-4-4	12/16/96 1600					
JM197								1		716	GP-SB-2	12/16/96 1010					
JM169								1		717	GP-SB-7	12/17/96 1020					
JM204								1		731	GP-12B-2	12/18/96 0850					
Shipment for Case complete? (Y/N)		Page 1 of 2		Sample used for a spike and/or duplicate				Additional Sampler Signatures				Chain of Custody Seal Number					

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) 	Date / Time 12/20/96 1600	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

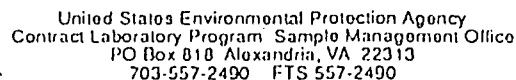
DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0344337



SAS No. (if applicable)	
----------------------------	--

Caso No.

25253

1. Project Code TEC-080A		Account Code 97TDPFAX1022LAC		2. Region No. 10		Sampling Co. FJE		4. Date Shipped 12-20-96		Carrier Airborne Express		6. Preservative (Enter in Column D)		7. Sample Description (Enter in Column A)	
Regional Information				Sampler (Name) Mike Martin				Airbill Number 666705524				1. HCl		1. Surface Water.	
Non-Superfund Program				Sampler Signature [Signature]				5. Ship To Compuchem Environmental				2. HNO ₃		2. Ground Water	
Site Name Nike				3. Type of Activity				Remedial Removal				3. NaHSO ₄		3. Leachate	
City, State				SF <input type="checkbox"/> Load <input type="checkbox"/> Remedial <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/>				PRP <input type="checkbox"/> PA <input type="checkbox"/> RA <input type="checkbox"/> REMA <input type="checkbox"/>				4. H ₂ SO ₄		4. Filtrate	
Site Spill ID				ST <input type="checkbox"/> SSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/>				FED <input type="checkbox"/> LSI <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>				5. Other (Specify)		5. Soil/Sediment	
								ATTN: Richard Bloom				6. Ice only		6. Oil (High only)	
								919-474-7033				N. Not preserved		7. Waste (High only)	
														8. Other (Specify)	

[illegible]

Shipment for Case complete? (Y/N)	Page 1 of ____	Sample used for a spike and/or duplicate	Additional Sampler Signatures	Chain of Custody Seal Number
------------------------------------	----------------	--	-------------------------------	------------------------------

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 2/20/21 1600	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)

☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS 0 2 1 1 0 0 1

& Chain of Custody Record (For Organic CLP Analysis)

(If applicable)

Case No.

1. Project Code TEC 680A	Account Code 977910PFAX 10ZZ-CA 00	2. Region No. 10	Sampling Co. E+E	4. Date Shipped 12-20-96	Carrier Airbus	6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Other (Specify) 6. Ice only N. Not preserved	7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinse 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)
Regional Information		Sampler (Name) Mike Martin		Airbill Number 4208 9902 73			
Non-Superfund Program		Sampler Signature <i>[Signature]</i>		5. Ship To Campuchon Env 4600 Siler Drive Res. Triangle Park, NC 27709 ATTN: Richard Brown			
Site Name Mike		3. Type of Activity Remedial Load <input type="checkbox"/> Pre-Remedial <input type="checkbox"/> Removal <input type="checkbox"/> SF <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>					
City, State		Site Spill ID					

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp/Grab	D Preservative from Box 6	E RAS Analysis				F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Performed Eval. -- = Not a QC Sample
					VOA	BNA	Pest/PCB	High only ARO/TOX						
JM180	2	L	G	1	2					GW1				
JM181	2				2					746 GW2	12/12/96 030			
JM184	2				2					6P 2-13				
JM185	2				2				96514700	DW1	12/14/96 1330			
JM186	2				2				96514701	DW2	12/16/96 1435			
JM187	2				2				702	DW3	12/16/96 1435			
JM188	2				2				703	DW4	12/17/96 0915			
JM190	2				2				705	DW-6	12/17/96 1400			MS/MSD
JM189	2				2				704	DW-5	12/17/96			
JM180	2				2				745	GW-1				

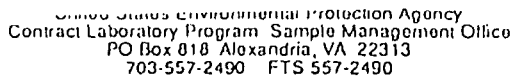
Shipment for Case complete? (Y/N)	Page 1 of 2	Sample used for a spike and/or duplicate	Additional Sampler Signatures	Chain of Custody Seal Number
-----------------------------------	--------------------	--	-------------------------------	------------------------------

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 12/20/96 1845	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

Split Samples ☐ Accepted (Signature)
☐ Declined

0344336



Organic Traffic Report & Chain of Custody Record (For Organic CLP Analysis)

SAS No.
(if applicable)

Case No.

25 253

[illegible]

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
<i>[Signature]</i>	12/20/06				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 910-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS 0045000

Yes!



Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No.
(if applicable)

Case No.

25253

1. Project Code TEC-080A	Account Code 477101PAX 1022 LA00	2. Region No. 10	Sampling Co. EJE	4. Date Shipped 12-20-96	Carrier Airborne	6. Preservative (Enter in Column D) 1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved	7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)
Regional Information		Sampler (Name) Mike Martin		Airbill Number 4208990273			
Non-Superfund Program		Sampler Signature 		5. Ship To Compuchem Environmental 4600 Silicon Drive Research Triangle Park, NC 27709 ATTN: Richard Bloom			
Site Name		3. Type of Activity Lead <input type="checkbox"/> Remedial <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> SF <input type="checkbox"/> Pre-Remedial <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>					
County, State		Site Spill ID					

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis				F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform. Eval. -- = Not a QC Sample
					VOA	BNA	Pes/PCB	High only ARO/TOX						
JM 208	5	Low	Grab	6	1	1			96514740	GP16-7	12-18-96 1215	mm		
JM 209	5	Low			2	2			96514741	GP17-2	12-18-96 1300			5,9
JM 178	5	Low			1	1			96514742	GP17-7	12-18-96 1340			
JM 210	5	Low			1	1			96514743	GP18-2	12-18-96 1405			
JM 179	5	Low			1	1			96514744	GP18-8	12-18-96 1435			
JM 204	5	Low			1	1			96514731	GP12B2	12-18-96 0900			
JM 173	5	Low			1	1			96514732	GP12B7	12-18-96 0920			
JM 205	5	Low			1	1			96514733	GP13A7	12-18-96 0935			
JM 174	5	Low			1	2			96514734	GP13B7	12-18-96 0945			5
JM 176	5	Low	✓	✓	1	1			96514738	GP15-8	12-18-96 1130			
Shipment for Case complete? (Y/N)		Page 1 of		Sample used for a spike and/or duplicate JM 209, JM 174 (BNA)					Additional Sampler Signatures			Chain of Custody Seal Number		

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none
	12-20-96 11:00				

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS



United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Analyte Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS NO.
(if applicable)

Case NO.

25253

1. Project Code TEC-680A	Account Code 97710 PAX 1022	2. Region No. 10	Sampling Co. EJE	4. Date Shipped 12-20-96	Carrier Airborne	6. Preservative (Enter in Column D) 1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved	7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)
Regional Information		Sampler (Name) Mike Martin		Airbill Number 666705524			
Non-Superfund Program		Sampler Signature 		5. Ship To Computer Environmental 4600 Silicon Drive Research Triangle Park, NC 27709 ATTN: Richard Bloom 919-474-7033			
Site Name		3. Type of Activity SF <input type="checkbox"/> Load PRP <input type="checkbox"/> PA <input type="checkbox"/> SSI <input type="checkbox"/> LSI <input type="checkbox"/> Remedial RIFS <input type="checkbox"/> RD <input type="checkbox"/> RA <input type="checkbox"/> O&M <input type="checkbox"/> NPLD <input type="checkbox"/> Removal CLEM <input type="checkbox"/> REMA <input type="checkbox"/> REM <input type="checkbox"/> OIL <input type="checkbox"/> UST <input type="checkbox"/>					
City, State		Site Spill ID					

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp/Grab	D Preservative from Box 6	E RAS Analysis				F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B - Blank S - Spike D - Duplicate PE - Perform Eval. -- Not a QC Sample
					VOA	BNA	PeS/PCB	High only ARO/TOX						
JM198	5	L	G	6					GP-6B-2	718	12/17/96 1150	MM		
JM172									GP-8B-7	723	12/17/96 1315			
JM199									GP-7B-2	720	12/17/96 1215			
JM207									GP-9-2	752	12/18/96 1150			
JM171									GP-7B-7	721	12/17/96 1255			
JM206									GP-14-8	736	12/18/96 1050			
JM175									GP-14-4	735	12/18/96 1040			
JM205									GP-13B-2	733	12/18/96 0935			
JM174									GP-13B-7	734	12/18/96 1000			
JM170									GP-6B-7	719	12/18/96 1200			MSD
Shipment for Case complete? (Y/N)		Page 1 of		Sample used for a spike and/or duplicate					Additional Sampler Signatures			Chain of Custody Seal Number		

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) 	Date / Time 12-20-96 1500	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0344338



Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

& Chain of Custody Record

(For Organic CLP Analysis)

(if applicable)

25253

1. Project Code TEC-080A	Account Code 97TD PFA 1022 Lab	2. Region No. 10	Sampling Co. EJE	4. Date Shipped 12-20-96	Carrier Airborne	6. Preservative (Enter in Column D) 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Other (Specify) 6. Ice only N. Not preserved	7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)					
Regional Information		Sampler (Name) Mike Martin		Airbill Number 4208990273								
Non-Superfund Program		Sampler Signature [Signature]		5. Ship To Compuchem Environmental 4600 Silicon Drive Research Triangle Park, NC 27709 ATTN: Richard Blum								
Site Name		3. Type of Activity										
City, State		Remedial SF <input type="checkbox"/> Lead PRP <input type="checkbox"/> PA ST <input type="checkbox"/> SSI FED <input type="checkbox"/> LSI		Removal RIFS <input type="checkbox"/> CLEM RD <input type="checkbox"/> REMA RA <input type="checkbox"/> REM O&M <input type="checkbox"/> OIL NPLD <input type="checkbox"/> UST								
Site Spill ID												
CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp/Grab	D Preservative from Box 6	E RAS Analysis VOA BNA Pest/PCB High only ARO/TOX		F Regional Specific Tracking Number or Tag Numbers	G Station Location Number GP-1-7	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform. Eval. -- = Not a QC Sample
JM 700	5	low	Grab	6	1		96514 722	GP-8A-2	12/17/96 1315	nm		
JM 166					1	1	96514 708	GP-1-7	12/16/96 000			
JM 199					1	1	96514 720	GP-7A-2	12/17/96 1230			
JM 198					1	1	96514 719	GP-6B-7	12/17/96 1260			
JM 16F					1	1	96514 715	GP-4-7	12-16-96 16K5			
JM 144					1	1	96514 707	GP-1-4	12-16-96 1430			
JM 197					1	1	96514 717	GP-5B-7	12-17-96 0054			
JM 175					1	1	96514 735	GP-14-4	12-18-96 1040			
JM 172					1	1	96514 723	GP-8A-7	12-17-96 1335			
JM 171							96514 721	GP-7A-7	12-17-96 1233			
Shipment for Case complete? (Y/N)		Page 1 of		Sample used for a spike and/or duplicate			Additional Sampler Signatures			Chain of Custody Seal Number		

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none
[Signature]	12/20/96 1345				

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0345620



& Chain of Custody Record (For Organic CLP Analysis)

(If applicable)

1. Project Code TEC-680A		Account Code 97-T10P FAX 1022		2. Region No. 10		Sampling Co. EJE		4. Date Shipped 12-20-96		Carrier Airborne		6. Preservative (Enter in Column D) 1. HCl 2. HNO ₃ 3. NaHSO ₄ 4. H ₂ SO ₄ 5. Other (Specify) 6. Ice only N. Not preserved		7. Sample Description (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Filtrate 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify)													
Regional Information				Sampler (Name) Mike Martin				Airbill Number 4208990273																			
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To Comarch Environmental 4600 Silicon Drive Research Triangle Park, NC 27709																			
Site Name Nike				3. Type of Activity Load <input type="checkbox"/> Pre-Remedial <input type="checkbox"/> Remedial <input type="checkbox"/> Removal <input type="checkbox"/> SF <input type="checkbox"/> RIFS <input type="checkbox"/> CLEM <input type="checkbox"/> PRP <input type="checkbox"/> PA <input type="checkbox"/> RD <input type="checkbox"/> REMA <input type="checkbox"/> ST <input type="checkbox"/> SSI <input type="checkbox"/> RA <input type="checkbox"/> REM <input type="checkbox"/> FED <input type="checkbox"/> LSI <input type="checkbox"/> O&M <input type="checkbox"/> OIL <input type="checkbox"/> NPLD <input type="checkbox"/> UST <input type="checkbox"/>				ATTN: Richard Bloom																			
City, State		Site Spill ID		CLP Sample Numbers (from labels)		A Enter # from Box 7		B Conc. Low Med High		C Sample Type: Comp./Grab		D Preservative from Box 6		E RAS Analysis VOA BNA PesV PCB High only ARO/TOX		F Regional Specific Tracking Number or Tag Numbers		G Station Location Number		H Mo/Day/Year/Time Sample Collection		I Sampler Initials		J Corresp. CLP Inorg. Samp. No.		K Enter Appropriate Qualifier for Designated Field QC B = Blank S = Spike D = Duplicate PE = Perform. Eval. - = Not a QC Sample	
JM 208		5		Low		Grab		6		1		1				96514739		GP16-2		12-18-96 1145		mm					
JM 207		5		Low		Grab		6		1		1				96514737		GP15-4		12-18-96 1110							
JM 198		5		Low		Grab		6		1		1				96514718		GP6A-2		12-19-96 1100							
JM 167		5		Low		Grab		6		1		1				96514712		GP-3-7		12-19-96 1530							
JM 196		5		Low		Grab		6		1		1				96514714		GP-4-4		12-18-96 1600							
Shipment for Case complete? (Y/N)		Page 1 of		Sample used for a spike and/or duplicate		Additional Sampler Signatures		Chain of Custody Seal Number																			

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 12-20-96 11700	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none
Split Samples <input type="checkbox"/> Accepted (Signature) <input type="checkbox"/> Declined					

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:

Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to Region Yellow - Lab Copy for Return to SMO

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0345621

1. Project Code TEC-680A		Account Code 92TIO/FAX 1027 LIAO		2. Region No. ID		Sampling Co. E+E		4. Date Shipped 1-15-97		Carrier Airborne Express					
Regional Information				Sampler (Name) mm/AH				Airbill Number 4208990376							
Non-Superfund Program				Sampler Signature <i>[Signature]</i>				5. Ship To Southwest Labs OF OK 1700 W. Albany, Suite C Broken Arrow, OK 74012							
Site Name Nike		State		Site Spill ID		3. Type of Activity									
						Remedial Removal									
						Lead Pro-RIFS Lead Remedial RD RIFSCLEMSF PA RA REMPRP ST SSI O&M OILST FED LSL NPLD UST									
						ATTN: Harry Bang									
CLP Sample Numbers (from labels)		A Enter # from Box 7	B Conc. Low Med High	C Sample Type Comp./Grab	D Preservative from Box 6	RAS Analysis			F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Enter Appropriate Qualification for Designated Field QC	
						VOA	BNA	PasV PCB	High only ARO/TOX						
JM262		Z	L	G	1	6	3	3		97034610	DW-7	1-14-97	mmjAH	MJM958	- , S, D
JM263		R	L	G	1	1				97034611	DW-7-TB	1-17-97	mmjAH	-	B
Shipment for Case complete? (Y/N)		Page 1 of 1		Sample used for a spike and/or duplicate JM262						Additional Sampler Signatures			Chain of Custody Seal Number 102885		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
<i>[Signature]</i>	1-15-97 1300				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

Split Samples ☐ Accepted (Signature)
☐ Declined

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0344345

EFA Report 10
 12(a) Social Assets
 Section 44 98101

Case No.: 1501007610007-

Project Code: _____ Account: _____

Name/Location _____

Proj. Off.: NYC 100-87691 Tel.# 212-312-2000

☒ Enforcement/Custody

~~Q~~ Data Confidential

☒ Possible Toxic/Hazardous (C.O.) 10/10/2010 706.671.9837

□ Data for STORET

Miscellaneous: 17/11/1999

706.671.9837

Sampling Crew: W. W. M. L. J. O. R. E. K.

Mrs. Mary Ann Nichols

Recorder:

(Signature Required)

[illegible]

LAB NUMBER				DEPTH	Unit	Type	COL MTD CD	QA CODE	TEMP DEG C	pH	CNDCTVTY umho/cm	COMPOSITE ONLY						Condition of Samples upon Receipt at Lab:				
Yr.	Wk	Seq									ENDING DATE							Custody Seals Intact: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> none				
												Mo.	Day	Time	Type	Freq	CHAIN OF CUSTODY RECORD					
																			Relinquished by: (signature)	Received by: (signature)	Date/Time	
																			Relinquished by: (signature)	Received by: (signature)	Date/Time	
																			Relinquished by: (signature)	Received by: (signature)	Date/Time	
																			Relinquished by: (signature)	Received by Mobile Lab For Field Analysis: (signature)	Date/Time	
																			Dispatched by: (signature)	Date/Time	Received for Lab by: (signature)	Date/Time
																			Method of Shipment			

EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101

EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101

EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101

Case No.: 4260/911/207

☒ Enforcement/Custody

Miscellaneous: (✓) 11-6-11

Sampling Crew: Martin, M. Kivshin

Project Code: _____ Account: _____

Ex: Data Confidential

Name/Location _____

☒ Possible Toxic/Hazardous

Proj. Off.: _____ Tel.// _____

□ Data for STORET

Recorder: *Wendy N. ...*

[illegible][illegible][illegible]

442069

Project Gutenberg Canada

Yesth, sw

For: of 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847

P. s.

ecology and environment
ecology and environment

EPA Region 10
1200 Sixth Avenue
Seattle WA 98101

FIELD SAMPLE DATA AND CHAIN OF CUSTODY SHEET

EPA Region 10
1200 Sixth Avenue
Seattle WA 98101


Case No.: 1009/11007-

Enforcement/Custody

Miscellaneous: 10120-7-10

Sampling Crew: Madyn Daffner et al.

Project Code: _____ Account: _____

 Data Confidential

Name/Location _____

☒ Possible Toxic/Hazardous

Proj. Off.: Tel.

□ Data for STORET

Recorder:

(Signature) _____

[illegible][illegible]

Observation City

Wieder

Freight & Mail by Express

Yellow

1 x 1/2 1/2 1/2 1/2 1/2

19.70

EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101

Case No.: _____ ☒ Enforcement/Custody Miscellaneous: _____ Sampling Crew: man/RL

Project Code: TEC-670A Account: _____ ☒ Data Confidential WTPH - Gasoline

Name/Location: AKC ☒ Possible Toxic/Hazardous WTPH - Diesel

Proj. Off.: _____ (EPA Lab Only, Leave Blank for Contract Lab) ☐ Data for STORET Recorder: W. J. ...

SOURCE CODE	Matrix				# CONTAINERS	LAB NUMBER	STORET STATION NUMBER	SAMPLING DATE & TIME	TRAFFIC REPORT NUMBERS		SAMPLER'S INITIALS	STATION DESCRIPTION								
	Oil	Water	Sediment	Tissue					Presrvd (Y/N)	Yr.			Wk.	Seq.	Yr	Mo	Dy	Time	Org.	Inorg.
22	X					27	02	16	16			man/RL	DW-7 MS, MSD							
22	X					27	03	16	17			man/RL	DW-7 Vol. 1000							

LAB NUMBER			DEPTH	COL MTD CD	QA CODE	TEMP DEG C	pH	CONDCTVITY umho/cm	COMPOSITE ONLY				Condition of Samples upon Receipt at Lab:				
Yr.	Wk.	Seq.							Unit	Type	ENDING DATE	Mo.	Day	Time	Typo	Freq	Custody Seals Intact: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> none

CHAIN OF CUSTODY RECORD		
Relinquished by: (signature)	Received by: (signature)	Date/Time
Relinquished by: (signature)	Received by: (signature)	Date/Time
Relinquished by: (signature)	Received by: (signature)	Date/Time
Relinquished by: (signature)	Received by Mobile Lab For Field Analysis: (signature)	Date/Time
Dispatched by: (signature)	Date/Time	Received for Lab by: (signature)
Method of Shipment		

Airborne Express 4207996477

RECEIVED
JUN 13 2006
Environmental Cleanup Office

Sample Plan Alteration Form

Project Name and TDD Number: Former Nike Launch Site # 81 06-01-0035

Material to be Sampled:

Sediment
Surface Water
QC Sample
Groundwater

Measurement Parameter: N-nitrosodimethylamine (NDMA), perchlorate, unsymmetrical dimethylhydrazine (UDMH), volatile organic compounds (VOCs), semivolatile organic compounds (SVOC), chlorinated pesticides (pesticides), polychlorinated biphenyls (PCBs), target analyte list (TAL) metals

Standard Procedure for Field Collection and Laboratory Analysis (cite reference):
Sediments, surface water, QC samples, and groundwater samples were collected following Ecology and Environment, Inc., Standard Operating Procedures

Reason for Change in Field Procedure or Analysis Variation: Sediment, surface water, and a trip blank QC sample were added to determine if the surface water pathway was a contamination pathway from the Former Nike Launch Site #81.

Variation from Field or Analytical Procedure: The two sediment samples were analyzed for all parameters listed above. The trip blank was analyzed for VOCs. The three surface water samples were analyzed for all parameters listed above. A rinsate blank sample was not collected as listed in the SQAP as all sampling equipment was dedicated. Two groundwater samples were not collected as listed in the SQAP as property owners denied access to their wells.

Special Equipment, Materials, or Personnel Required: Additional sampling jars (EnCore-type samplers, 8 ounce glass jars, 1-liter polyethylene bottles, 32-ounce amber glass jars, and 40-milliliter glass vials) and preservatives (hydrochloric acid and nitric acid).

Initiator's Name:	<u>Mary Wozniak</u>	Date:	<u>6/12-06</u>
Project Manager:	<u>Mary Wozniak</u>	Date:	<u>6/12-06</u>
QA Officer:	<u>Mary Wozniak</u>	Date:	<u>6/12-06</u>



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

July 6, 2006

RECEIVED
JUL 07 2006
Environmental Cleanup Office

Reply To
Attn. Of: OEA-095

MEMORANDUM

SUBJECT: Data Validation for Former Nike Launch Site #81 SI,
Case# 35417, SDG: MJ73T9, Inorganic Analysis

FROM: Donald Matheny, Chemist *DM*
Technical Support Unit, OEA

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup (ECL-115)

CC: Mark Woodke, Ecology & Environment

The data validation of inorganic analyses for the above sample set is complete. Three (3) water samples were analyzed for total elements by Bonner Analytical, Hattiesburg, MS. Sample numbers for this delivery group are as follows:

MJ73T9 MJ73W1 MJ73W3

DATA QUALIFICATIONS

The following comments refer to the lab's performance in meeting the quality control specifications outlined in the "CLP Statement of Work (CLP-SOW) for Inorganic Analysis, rev. ILM05.3", the "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" and the judgment of the reviewer. The comments presented herein are based on the information provided for the review.

1.0 TIMELINESS - Acceptable

The holding time from the date of collection to the date of digestion and analyses were met for all elements (180 days, mercury 28 days). Samples were collected on 6/6/06. ICP-AES and mercury analyses were conducted on 6/13/06.

2.0 INSTRUMENT CALIBRATION/VERIFICATION - Acceptable

For ICP-AES analysis, instrument calibration was performed in accordance with method requirements. Recoveries for instrument verification standards (93-106%) met the frequency (10%) and recovery (90-110%) criteria.

For mercury, a blank and five standards were digested for instrument calibration. The correlation coefficient (0.999) met the criterion (≥ 0.995). Recoveries for verification standards (95-104%) met the frequency (10%) and recovery (80-120%) criteria.

Quantitation verification standards met both the frequency and recovery criteria for all elements.

3.0 ICP-AES INTERFERENCE CHECK SAMPLE (ICS) - Acceptable

An ICS was analyzed at the required frequency for each analytical run. ICS recoveries met the recovery criterion (80-120% or $\pm 2 \times \text{CRDL}$) for all elements.

4.0 LABORATORY CONTROL SAMPLES (LCS) - Acceptable

An aqueous Laboratory Control Sample was digested and analyzed. Percent recoveries (97-109%) were within the criterion (80-120%).

5.0 BLANKS

Preparation and instrument control blanks were prepared and analyzed in accordance with method requirements. Blank results were either non-detected or below a factor that could impact analytical sample results for all analytes with the exception of aluminum and zinc. Affected aluminum and zinc results were qualified (U).

6.0 MATRIX SPIKE ANALYSIS

A matrix spike was analyzed for sample MJ73W3. Percent recoveries (98-111%) met the recovery limits (75-125%) for all elements with the exception of arsenic (72%). Arsenic data were qualified (JL or UJL) and may be biased low.

7.0 DUPLICATE SAMPLE ANALYSIS - Acceptable

A duplicate sample was analyzed for sample MJ73W3. Relative percent difference results ($\leq 1\%$) were within the control limits ($\pm 20\%$ or $\pm \text{CRDL}$) for waters.

8.0 ICP-AES SERIAL DILUTION

A five-fold serial dilution was analyzed for sample MJ73W3. Percent differences ($\leq 4\%$) met the control limits ($\leq 10\%$) for all applicable elements with the exception of aluminum (18%) and calcium (37%). Aluminum and calcium values were qualified (JL) and may be biased low.

9.0 ASSESSMENT SUMMARY

The following is a summary of qualified data:

A number of reported values for aluminum and zinc were qualified (U) due to the detected presence of these analytes in the preparation and/or instrument verification blanks.

Arsenic data were qualified (J or UJ) due to a low matrix spike recovery. Arsenic values may be biased low.

Aluminum and calcium data were qualified (JL) due to high percent differences for the serial dilution analysis. Reported values for these analytes may be biased low.

DATA QUALIFIERS

- U - The material was analyzed for, but was not detected above the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. The analyte may or may not be present in the sample.
- UJ - The analyte was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

PROJECT SPECIFIC DATA QUALIFIERS:

- L - Low bias.
- H - High bias.
- K - Unknown Bias.
- Q - Detected concentration is below the method reporting limit/Contract Required Quantitation Limit.

USEPA - CLP

1A-IN

000009

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MJ73T9

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35417 NRAS No.: _____ SDG NO.: MJ73T9

Matrix (soil/water): WATER Lab Sample ID: BT39792

Level (low/med): LOW Date Received: 06/08/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	174	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> U	P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U	<input checked="" type="checkbox"/> U/L	P
7440-39-3	Barium	4.3	<input checked="" type="checkbox"/>	Q	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5100		<input checked="" type="checkbox"/> J/L	P
7440-47-3	Chromium	0.50	<input checked="" type="checkbox"/>	Q	P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	2.1	<input checked="" type="checkbox"/>	Q	P
7439-89-6	Iron	150			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	1040	<input checked="" type="checkbox"/>	Q	P
7439-96-5	Manganese	23.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.1	<input checked="" type="checkbox"/>	Q	P
7440-09-7	Potassium	1760	<input checked="" type="checkbox"/>	Q	P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	2580	<input checked="" type="checkbox"/>	Q	P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	7.9	<input checked="" type="checkbox"/>	U	P

Dr
7-6-06

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000010

EPA SAMPLE NO.

MJ73W1

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35417 NRAS No.: _____ SDG NO.: MJ73T9

Matrix (soil/water): WATER Lab Sample ID: BT39793

Level (low/med): LOW Date Received: 06/08/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	614		B JL	P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U	N u JL	P
7440-39-3	Barium	5.8	J	Q	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	6390		B JL	P
7440-47-3	Chromium	1.4	J	Q	P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	2.1	J	Q	P
7439-89-6	Iron	452			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	1020	J	Q	P
7439-96-5	Manganese	24.6			P
7439-97-6	Mercury	0.032	J	Q	CV
7440-02-0	Nickel	1.6	J	Q	P
7440-09-7	Potassium	123	J	Q	P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	2180	J	Q	P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	2.3	J	Q	P
7440-66-6	Zinc	6.5	J	u	P

2H
7-6-06

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

USEPA - CLP

1A-IN

INORGANIC ANALYSIS DATA SHEET

000011

EPA SAMPLE NO.

MJ73W3

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35417 NRAS No.: _____ SDG NO.: MJ73T9

Matrix (soil/water): WATER Lab Sample ID: BT39794

Level (low/med): LOW Date Received: 06/08/2006

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1030		B JL	P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	13.9		N JL	P
7440-39-3	Barium	11.2	J	Q	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5160		B JL	P
7440-47-3	Chromium	2.6	J	Q	P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	3.5	J	Q	P
7439-89-6	Iron	730			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	2170	J	Q	P
7439-96-5	Manganese	58.8			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.3	J	Q	P
7440-09-7	Potassium	1320	J	Q	P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	12300			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	3.9	J	Q	P
7440-66-6	Zinc	7.9	J	Q	P

DM
7-6-06

Color Before: YELLOW Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

July 6, 2006

Reply To
Attn. Of: OEA-095

MEMORANDUM

SUBJECT: Data Validation for Former Nike Launch Site #81 SI,
Case# 35417, SDG: MJ73W0, Inorganic Analysis

FROM: Donald Matheny, Chemist *DM*
Technical Support Unit, OEA

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup (ECL-115)

CC: Mark Woodke, Ecology & Environment

The data validation of inorganic analyses for the above sample set is complete. Two (2) sediment samples were analyzed for total elements by Bonner Analytical, Hattiesburg, MS. Sample numbers for this delivery group are as follows:

MJ73W0 MJ73W2

DATA QUALIFICATIONS

The following comments refer to the lab's performance in meeting the quality control specifications outlined in the "CLP Statement of Work (CLP-SOW) for Inorganic Analysis, rev. ILM05.3", the "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" and the judgment of the reviewer. The comments presented herein are based on the information provided for the review.

1.0 TIMELINESS - Acceptable

The holding time from the date of collection to the date of digestion and analyses were met for all elements (180 days, mercury 28 days). Samples were collected on 6/6/06. ICP-AES analysis was conducted on 6/9/06 and mercury analysis on 6/14/06.

2.0 INSTRUMENT CALIBRATION/VERIFICATION - Acceptable

For ICP-AES analysis, instrument calibration was performed in accordance with method requirements. Recoveries for instrument verification standards (93-110%) met the frequency (10%) and recovery (90-110%) criteria.

For mercury, a blank and four standards were digested for instrument calibration. The correlation coefficient (0.999) met the criterion (≥ 0.995). Recoveries for verification standards (96-106%) met the frequency (10%) and recovery (80-120%) criteria.

Quantitation verification standards met both the frequency and recovery criteria for all elements.

3.0 ICP-AES INTERFERENCE CHECK SAMPLE (ICS) - Acceptable

An ICS was analyzed at the required frequency for each analytical run. ICS recoveries met the recovery criterion (80-120% or $\pm 2\text{xCRDL}$) for all elements.

4.0 LABORATORY CONTROL SAMPLES (LCS) - Acceptable

A solid Laboratory Control Sample was digested and analyzed. Recoveries were within the established control limits for solids.

5.0 BLANKS

Preparation and instrument control blanks were prepared and analyzed in accordance with method requirements. Blank results were either non-detected or below a factor that could impact analytical sample results for all analytes with the exception of arsenic. Arsenic results were qualified (U).

6.0 MATRIX SPIKE ANALYSIS

A matrix spike was analyzed for sample MJ73W2. Percent recoveries (75-100%) met the recovery limits (75-125%) for all elements with the exception of antimony (26%), manganese (72%) and selenium (64%). The post digestion spike recovery for antimony was 90%. Data for these elements were qualified (JL or UJL) and may be biased low.

7.0 DUPLICATE SAMPLE ANALYSIS - Acceptable

A duplicate sample was analyzed for sample MJ73W2. Relative percent difference results ($\leq 29\%$) were within the control limits ($\pm 35\%$ or $\pm 2\text{xCRDL}$) for soil/sediments.

8.0 ICP-AES SERIAL DILUTION

A five-fold serial dilution was analyzed for sample MJ73W2. Percent differences ($\leq 10\%$) met the control limits ($\leq 10\%$) for all applicable elements with the exception of copper (24%) and zinc (20%). Copper and zinc data were qualified (JL) and may be biased low.

9.0 ASSESSMENT SUMMARY

The following is a summary of qualified data:

Arsenic data were qualified (U) due to the detected presence of this analyte in the preparation and/or instrument verification blanks.

Antimony, manganese and selenium data were qualified (J or UJ) due to low matrix spike recoveries. Values for these elements may be biased low.

Copper and zinc were qualified (JL) due to high percent differences for the serial dilution analysis. Reported values for these analytes may be biased low.

DATA QUALIFIERS

- U - The material was analyzed for, but was not detected above the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. The analyte may or may not be present in the sample.
- UJ - The analyte was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

PROJECT SPECIFIC DATA QUALIFIERS:

- L - Low bias.
- H - High bias.
- K - Unknown Bias.
- Q - Detected concentration is below the method reporting limit/Contract Required Quantitation Limit.

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MJ73W0

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35417 NRAS No.: _____ SDG NO.: MJ73W0

Matrix (soil/water): SOIL Lab Sample ID: BT39790

Level (low/med): LOW Date Received: 06/08/2006

% Solids: 86.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8650			P
7440-36-0	Antimony	6.9	<i>B</i>	<i>N u J L</i>	P
7440-38-2	Arsenic	1.1	<i>J</i>	<i>u</i>	P
7440-39-3	Barium	39.1			P
7440-41-7	Beryllium	0.23	<i>J</i>	<i>Q</i>	P
7440-43-9	Cadmium	0.58	<i>U</i>		P
7440-70-2	Calcium	4590			P
7440-47-3	Chromium	25.2			P
7440-48-4	Cobalt	6.0			P
7440-50-8	Copper	10.0		<i>B J L</i>	P
7439-89-6	Iron	13500			P
7439-92-1	Lead	0.72	<i>J</i>	<i>Q</i>	P
7439-95-4	Magnesium	5260			P
7439-96-5	Manganese	206		<i>N u J L</i>	P
7439-97-6	Mercury	0.12	<i>U</i>		CV
7440-02-0	Nickel	35.3			P
7440-09-7	Potassium	581			P
7782-49-2	Selenium	4.0	<i>B</i>	<i>N u J L</i>	P
7440-22-4	Silver	1.2	<i>U</i>		P
7440-23-5	Sodium	316	<i>J</i>	<i>Q</i>	P
7440-28-0	Thallium	2.9	<i>U</i>		P
7440-62-2	Vanadium	35.6			P
7440-66-6	Zinc	23.3		<i>B J L</i>	P

DM
7-6-06

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: YES

Comments: PLANT MATTER

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MJ73W2

Lab Name: Bonner Analytical Testing Compa Contract: 68W02067

Lab Code: BONNER Case No.: 35417 NRAS No.: _____ SDG NO.: MJ73W0

Matrix (soil/water): SOIL Lab Sample ID: BT39791

Level (low/med): LOW Date Received: 06/08/2006

% Solids: 75.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20400			P
7440-36-0	Antimony	8.0	B	N U JL	P
7440-38-2	Arsenic	1.6		U	P
7440-39-3	Barium	81.1			P
7440-41-7	Beryllium	0.41	J	A	P
7440-43-9	Cadmium	0.13	J	A	P
7440-70-2	Calcium	4820			P
7440-47-3	Chromium	35.9			P
7440-48-4	Cobalt	10.7			P
7440-50-8	Copper	26.8		B JL	P
7439-89-6	Iron	21900			P
7439-92-1	Lead	2.4			P
7439-95-4	Magnesium	6370			P
7439-96-5	Manganese	303		N JL	P
7439-97-6	Mercury	0.061	J	Q	CV
7440-02-0	Nickel	60.5			P
7440-09-7	Potassium	970			P
7782-49-2	Selenium	4.6	B	N U JL	P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	366	J	Q	P
7440-28-0	Thallium	3.3	U		P
7440-62-2	Vanadium	49.3			P
7440-66-6	Zinc	48.8		B JL	P

DM
7-6-06

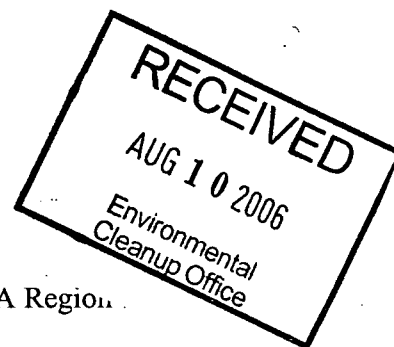
Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: YES

Comments: PLANT MATTER



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366



MEMORANDUM

SUBJECT: Data Release for NDMA Results from the USEPA Region 10 Laboratory

PROJECT NAME: Former Nike Launch Site

PROJECT CODE: TEC-877A

FROM: Gerald Dodo, Chemistry Supervisor
USEPA Region 10 Laboratory

TO: Ken Marcy, Project Officer
Office of Environmental Cleanup
Site Cleanup Unit 2, USEPA Region 10

CC: Mark Woodke, Ecology & Environment

I have authorized release of this data package. Attached you will find the NDMA results for the Former Nike Launch Site project samples collected on 06/06/2006. For further information regarding the attached data, contact Randy Cummings at (360)871-8707. For the schedule of the remaining analyses, contact Gerald Dodo at (360)871-8728.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

July 11, 2006

MEMORANDUM

SUBJECT: Data Review for the NDMA Analysis of Former Nike Launch Site.

Project Codes: TEC-877A Account Code: 06T10P302DD2C10ZZLA00

FROM: Randy Cummings, Chemist, Laboratory
Office of Environmental Assessment, USEPA Region 10

TO: Ken Marcy, Project Officer
Office of Environmental Cleanup, Site Cleanup Unit 2, USEPA Region 10

CC: Mark Woodke, Ecology & Environment

The data review of the N-nitrosodimethylamine (NDMA) analysis results for the Former Nike Launch Site water samples has been completed. The samples were analyzed by the USEPA Region 10 Laboratory located in Manchester, WA using USEPA SW846 Method 8270C (Manchester SOPs Or_P001B version 3, and Or_270C, version 3).

The data for the following sample number is reviewed in this report.

06234050 06234051 06234052 06234053 06234055 06234057 06234061 06234062
06234063 06234064 06234065 06234066

DATA QUALIFICATIONS

The following comments refer to laboratory performance in meeting the quality control specifications outlined in the analytical method, the Manchester Laboratory Quality Assurance Manual, standard operating procedures, and professional judgment.

The conclusions presented herein are based on the information provided for the review.

Holding Time - Acceptable

The samples were extracted within seven days of collection. Extracts have a holding time maximum of 40 days from the time of preparation. The sample was analyzed within this criterion.

GC/MS Tuning and Performance - Acceptable

The tuning summary agreed with the raw data. All decafluorotriphenylphosphine ion abundance ratios met criteria. Sample analyses were preceded by a tune less than 12 hours prior to analysis.

Initial Calibration - Acceptable

An initial calibration was performed on 06Jun06 for the target and surrogate compounds and met the criteria outlined in the SOP (Or_270C, version 3). Average relative response factors (RRFs) were ≥ 0.05 . Percent relative standard deviations (%RSDs) of the RRFs were $\leq 15\%$. Coefficients of Determination were ≥ 0.99 .

Second source check analyses resulted with percent differences from the expected values of $\leq 30\%$ for all compounds.

Continuing Calibration - Acceptable

The continuing calibration check met the criteria for frequency of analysis and relative retention time (RRT) windows for all target and surrogate compounds. The RRFs were ≥ 0.05 and the percent accuracies were 80-120% of the true values.

Blanks - Acceptable

Two method blanks were prepared and analyzed to evaluate the potential for laboratory contamination and the effect on sample results. Target compounds detected in the samples were reported without qualification if the sample result area integration exceeded ten times that of the blank for common contaminants (e.g., phthalates) or five times that of the blank for the other target compounds. Detected sample results were qualified 'U' if the area integration was below these criteria. The sample concentration or the sample quantitation limit, whichever is greater, was reported as the qualified result.

Surrogates - Acceptable

Surrogate recoveries are used to help in the evaluation of laboratory performance on individual samples. For this project two surrogates were used: d₄-1,2-dichlorobenzene and ²C₁₃/d₆-NDMA. The SOP calls for spike concentration of 20 µg/sample, whereas the samples in this set were spiked at 4 µg/sample. However, the recoveries met the SOP criteria at lower spike level for d₄-1,2-dichlorobenzene (20 – 130%) and were within the NDMA acceptance limits for ²C₁₃/d₆-NDMA (50 – 70%). Therefore no qualification resulted.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) - Acceptable

Matrix spiked samples are used to evaluate matrix affects on analyte recovery. One pair of matrix spiked samples was prepared for this set. This pair met the criteria for accuracy (50 – 70%) using the two standard deviation range provided in the SOP for fortified blanks, and precision (35%) from the criterion provided in the QaPP).

Laboratory Control Sample - Acceptable

Data for laboratory control samples (LCS) are generated to provide ongoing information on the accuracy of the analytical method and the laboratory performance. Four spiked reagent water analyses were performed as LCSs (two pairs: OBF6163F1 and OBF6163F2, spiked at 4ppB; and OBF6163F3 and OBF6163F4, spiked at 0.8ppB). The LCS recoveries were compared against criteria based on historical results from pooled water extraction recoveries (50 – 70%, spiked at 16ppB).

Sample OBF6163F4 had recoveries below the established range. The deviation was not judged to be critical to evaluating the method performance for this project since one of the surrogates was an isotope labeled form of NDMA. The labeled form of NDMA should accurately reflect the expected recovery of the un-labeled compound. Recovery of this surrogate was within the established range for all of the samples, blanks and spiked blanks except OBF6163F4. Recovery for this surrogate in sample OBF6163F4 was low proportionally to the un-labeled compound, thus suggesting that the results were isolated to the sample and not indicative of an overall problem for the project. Therefore no qualification was applied.

Internal Standard Performance - Acceptable

The performance criteria for internal standards ensure that GC/MS sensitivity and response are stable during every analytical run. The retention time variations of all internal standards were within 30 seconds of the continuing calibration standard. The percent areas of all the internal standards were within the specified 50% to 200% of the continuing calibration standard.

Target Compound Identification - Acceptable

The RRTs for all detected target compounds were within acceptable limits of the initial or continuing calibration standards. No reference spectra data base was created. Identifications were based on selected ion ratios. Criteria were met, or judged acceptable, for ion abundance matching. No target compounds were detected.

Compound Quantitation - Acceptable

The initial calibration functions were used for calculations. Reported quantitation limits were based on the initial calibration standards and sample size used for the analysis. All manual integrations were reviewed and judged to be appropriate.

Overall Assessment

All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this, the overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact Randy Cummings at the Region 10 Laboratory, phone number (360) 871-8707.

Qualifier/ Remark Code	Definition (Codes Assigned to Values)
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable. <u>No value is reported with this qualification.</u>
NJ	There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. <u>No value is reported with this qualification.</u>

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234050
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 1N		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	56	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	

7/21/06

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Page 2 of 20

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234051
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles			Container ID : 1N
Method	8270 BNA			Analysis Date : 6/13/2006
Prep Method	3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	63	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	60	%Rec	

06234051 Reg sample

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234051
Type: Matrix Spike

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 3N		
Method	: 8270 BNA	Analysis Date : 6/14/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	59	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	58	%Rec	
	62759 N-Nitrosodimethylamine	57	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: 06234051
Type: Matrix Spike Dupl

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 5N
Method	: 8270 BNA			Analysis Date : 6/14/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	57	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	58	%Rec	
	62759 N-Nitrosodimethylamine	56	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234052
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 2N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	58	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	55	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD01SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234053
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 1N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	62	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	59	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: PD02SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234055
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 1N		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	58	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	56	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description: CR01SW

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234057
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 3N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	57	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234061
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 1N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	59	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	60	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234062
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 1N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	52	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	62	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234063
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 1N		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s)	: 62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	50	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	53	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234064
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 2N
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	50	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	59	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234065
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles	Container ID : 2N		
Method	8270 BNA	Analysis Date : 6/13/2006		
Prep Method	3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	56	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected: 6/6/06
Matrix: Liquid
Sample Number: 06234066
Type: Reg sample

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID: 2N
Method	: 8270 BNA			Analysis Date: 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date: 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	55	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	59	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F1
Type: LCS

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 0		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	49	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	56	%Rec	
	62759 N-Nitrosodimethylamine	53	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F2
Type: LCSD

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 0
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Surrogate(s):	95501 Benzene, 1,2-dichloro-	48	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	57	%Rec	
	62759 N-Nitrosodimethylamine	55	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F3
Type: LCS

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles	Container ID : 0		
Method	8270 BNA	Analysis Date : 6/13/2006		
Prep Method	3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Surrogate(s)	95501 Benzene, 1,2-dichloro-	44	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	51	%Rec	
	62759 N-Nitrosodimethylamine	55	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBF6163F4
Type: LCSD

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles			Container ID : 0
Method	: 8270 BNA			Analysis Date : 6/13/2006
Prep Method	: 3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Surrogate(s)	: 95501 Benzene, 1,2-dichloro-	39	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	42	%Rec	
	62759 N-Nitrosodimethylamine	46	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBW6163B1
Type: Blank

		Result	Units	Qlfr
GCMS				
Parameter	: Semi-volatiles	Container ID : 0		
Method	: 8270 BNA	Analysis Date : 6/13/2006		
Prep Method	: 3510 Separatory funnel liq-liq extraction	Prep Date : 6/12/2006		
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	52	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	58	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project TEC-877A

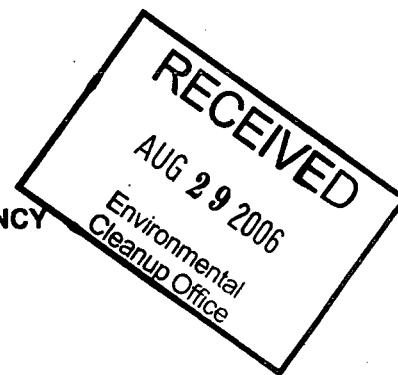
Project Code: TEC-877A
Project Name: FORMER NIKE LAUNCH SITE #81
Project Officer: KEN MARCY
Account Code: 06T10P302DD2C10ZZLA00
Station Description:

Collected:
Matrix: Liquid
Sample Number: OBW6163B2
Type: Blank

		Result	Units	Qlfr
GCMS				
Parameter	Semi-volatiles			Container ID : 0
Method	8270 BNA			Analysis Date : 6/13/2006
Prep Method	3510 Separatory funnel liq-liq extraction			Prep Date : 6/12/2006
Analytes(s):	62759 N-Nitrosodimethylamine	0.1	ug/L	U
Surrogate(s):	95501 Benzene, 1,2-dichloro-	50	%Rec	
	*17829059 D6-13C2 N-Nitrosodimethylamine	52	%Rec	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101



August 28, 2006

MEMORANDUM

SUBJECT: Data validation report for the volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides (PEST), and PCB Aroclors (PCB) analysis of samples from the Former Nike Launch Site #81
Case: 35417 SDG: J73T9

FROM: Brandon Perkins, QA Chemist *BP*
Office of Environmental Assessment

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup

CC: Mark Woodke
Ecology and Environment

The quality assurance (QA) review of 3 water and 2 soil samples collected from the above referenced site has been completed. The samples were analyzed for VOCs, SVOCs, Pesticides, and PCB Aroclors in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Multi-Concentration Organic Analysis (SOM01.1). The analysis was performed by Datachem Laboratories of Salt Lake City, UT. The following samples were reviewed in this validation report:

SDG: J73T9

J73T9 J73W0 J73W2 J73W3 J73W7

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control (QC) Specifications outlined in the USEPA CLP SOW for Multi Concentration Organic Analysis (SOM01.1) and the USEPA CLP National Functional Guidelines for Organic Data Review (1/2005).

The conclusions presented herein are based on the information provided for the review.

Holding Time -

All of the samples met the technical holding time criteria for VOCs, SVOCs, pesticide, and PCB Aroclors analysis. The samples were collected on 6/6/06, VOCs analysis occurred on 6/13/06 – 6/14/06, SVOCs, Pest, and PCB extraction occurred on 6/13/06 & 6/15/06; SVOCs analysis occurred on 6/19/06 – 6/21/06, PEST analysis occurred on 6/26/06, and PCB analysis occurred on 6/21/06. SVOC samples were re-extracted and re-analyzed on 6/26/06, outside of holding time due to spiking of incorrect surrogates. None of the data was qualified on this basis.

Instrument Performance Checks – Acceptable

The GC/MS systems used for VOCs and SVOCs analysis met the performance checks and ion abundance criteria. All of the samples were analyzed within an acceptable 12-hour QC period and the instruments used remained stable throughout the course of analyses. None of the data were qualified on this basis.

The GC system used in the Pest analysis met the performance checks, resolution checks, and percent endrin and 4,4'-DDT breakdown criteria. All of the samples were analyzed within an acceptable 12-hour QC period and the instrument used remained stable throughout the course of analysis. None of the data was qualified on this basis.

Initial Calibrations (ICAL) -

The ICAL curves for VOCs and SVOCs analysis met the technical acceptance criteria set forth by the SOW for the percent relative standard deviations (%RSDs), chromatographic resolutions, retention times, and minimum response factors (RRFs) for all target compounds and surrogates with the following exceptions:

- VOC ICAL 5/23/06 instr. 5972-P - The mean RRF of 1,4-Dioxane (0.0013) exceeded the control limit of 0.010. This compound was not detected and therefore was qualified unusable "R".
- VOC ICAL 5/11/06 instr. 5972-S - The mean RRF of 1,4-Dioxane (0.0025) exceeded the control limit of 0.010. This compound was not detected and therefore was qualified unusable "R".

The ICAL curves for Pest analysis met the frequency of analysis and other technical acceptance criteria set forth by the SOW for the percent relative standard deviations (%RSDs), retention times, and calibration factors (CFs) for all target compounds and surrogates.

The initial calibration curves for PCBs analysis met the frequency of analysis and other technical acceptance criteria set forth by the SOW for the percent relative standard deviations (%RSDs), retention times, and calibration factors (CFs) for all target compounds and surrogates.

Continuing Calibration Verification (CCV)

All of the GC/MS CCVs for VOCs and SVOCs analysis met the criteria for frequency of analysis, and the technical acceptance criteria (minimum response factors (RFs) and percent differences (%Ds)) with the following exceptions:

Date/Time of Analysis	Compound	%D (25% limit)	Qualifier Detect/Non-detect	Associated Samples
6/26/06 13:20 instr. 5972-R	Hexachlorocyclopentadiene	26.9	J/None	J73T9RX, J73W1RX, J73W3RX
	4-Nitrophenol	27.2	J/None	
	Pentachlorophenol	37.4	J/None	

All of the GC CCVs for Pest analysis met the criteria for frequency of analysis, retention times, and percent differences (%Ds) of the technical acceptance criteria. None of the data was qualified on this basis.

All of the GC CCVs for PCBs analysis met the criteria for frequency of analysis, retention times, and percent differences (%Ds) of the technical acceptance criteria. None of the data was qualified on this basis.

Quantitation Limits - Acceptable

The samples were analyzed at the contract required quantitation limits (CRQL). The CRQLs were based on the lowest standard concentration analyzed in the initial calibrations. Target compounds that were detected at concentrations less than the QLs were qualified as estimated, "J". Detected compounds at concentrations over the calibration range were analyzed by the laboratory at a dilution. Trace levels of common laboratory contaminants detected in the samples at concentrations less than CRQLs were qualified by the reviewer as non-detect, "U" and reported at the CRQL. All of the reported results were adjusted for sample amounts analyzed. When applicable, all of the "E" and "D" qualifiers applied by the laboratory were crossed-out by the reviewer.

It is recommended that data users should utilize the results/analytical run selected by the reviewer where more than one analysis was performed on a single extract (i.e., dilution, re-analysis).

Blanks - Acceptable

All method and/or instrument blanks analyzed for VOCs, SVOCs, Pest, and PCBs were acceptable with the following exceptions

- ▶ Trace levels of methylene chloride was detected in the one of the method blanks. This compound is a common laboratory contaminant. Therefore detected methylene chloride at concentrations less than 10x the blank value, within samples associated with this blanks, were qualified as non-detects, "U".
- ▶ Trace levels of toluene was detected in the full scan method blank. Detected toluene concentrations less than 5x the blank values, within samples associated with this blank was qualified as non-detects, "U".
- ▶ Trace levels of bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and di-n-butylphthalate were detected in one of the method blanks. These compounds are common laboratory contaminants. Therefore detected bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and di-n-butylphthalate at concentrations less than 10x the blank value, within samples associated with this blank, were qualified as non-detects, "U".
- ▶ Trace levels of acetphenone was detected in one of the method blanks. Detected acetphenone at concentrations less than 5x the blank values, within samples associated with this blank was qualified as non-detects, "U".
- ▶ Trace levels of methoxychlor was detected in one of the method blanks. Detected methoxychlor at concentrations less than 5x the blank values, within samples associated with this blank was qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples, and QC samples were analyzed in accordance with the SOW specified analytical sequence. None of the data was qualified on this basis.

Surrogates

Fourteen VOCs, Eighteen SVOCs and two Pest/PCB surrogates were spiked in all the samples and QC samples to evaluate laboratory performance. The surrogates and their corresponding recovery acceptance limits are:

DMCs	Recovery Limits (%)	DMCs	Recovery Limits (%)
Vinyl Chloride-d3 (VCL)	65-131	1,2-Dichloropropane-d6 (DPA)	79-124
Chloroethane-d5 (CLA)	71-131	Toluene-d8 (TOL)	77-121
1,1-Dichloroethene-d2 (DCE)	55-104	Trans-1,3-Dichloropropene-d4 (TDP)	73-121
2-Butanone-d5 (BUT)	49-155	2-Hexanone-d5 (HEX)	28-135
Chloroform-d (CLF)	78-121	1,4-Dioxane-d8 (DXE)	50-150
1,2-Dichloroethane-d4 (DCA)	78-129	1,1,2,2-Tetrachloroethane-d2 (TCA)	73-125
Benzene-d6 (BEN)	77-124	1,2-Dichlorobenzene (DCZ)	80-131
Phenol-d5 (PHL)	17-103	Dimethylphthalate-d6 (DMP)	43-111
Bis-(2-chloroethyl)ether-d8 (BCE)	12-98	Acenaphthylene-d8 (ACY)	20-97
2-Chlorophenol-d4 (2CP)	13-101	4-Nitrophenol-d4 (4NP)	16-166
4-Methylphenol-d8 (4MP)	8-100	Fluorene-d10 (FLR)	40-108
Nitrobenzene-d5 (NBZ)	16-103	4,6-Dinitro-2-methylphenol-d2 (NMP)	1-121
2-Nitrophenol-d4 (2NP)	16-104	Anthracene-d10 (ANC)	22-98
2,4-Dichlorophenol-d3 (DCP)	23-104	Pyrene-d10 (PYR)	51-120
4-Chloroaniline-d4 (4CA)	1-145	Benzo(a)pyrene-d12 (BAP)	43-111
Fluoranthene-d10 (SIM) (FLN)	50-150	2-Methylnaphthalene-d10 (SIM) (2MN)	50-150
Tetrachloro-m-xylene (TCX)	30-150	Decachlorobiphenyl (DCB)	30-150

All of the surrogate recoveries met the applicable recovery criteria with the following exceptions:

Sample	DMC	Recovery (%)	Qualification Detects/Non-detects	Associated compounds
J73T9	DXE	180	J/None	1,4-Dioxane
J73W3	DXE	112	J/None	1,4-Dioxane
J73W7	DXE	106	J/None	1,4-Dioxane

J73T9	NBZ	125	J/None	Acetophenone, N-nitroso-di-n-propylamine, Hexachloroethane, Nitrobenzene, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, N-Nitrosodiphenylamine
J73W1	PHL	131	J/None	Benzaldehyde, Phenol
	NBZ	151	J/None	Acetophenone, N-nitroso-di-n-propylamine, Hexachloroethane, Nitrobenzene, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, N-Nitrosodiphenylamine
J73W3	PHL	133	J/None	Benzaldehyde, Phenol
	NBZ	134	J/None	Acetophenone, N-nitroso-di-n-propylamine, Hexachloroethane, Nitrobenzene, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, N-Nitrosodiphenylamine

Due to laboratory error SVOC surrogates were spiked incorrectly for samples J73T9, J73W1, and J73W3. The spiking solution only contained the surrogates NBZ and PHL which accounts for zero percent recovery of other surrogates. The laboratory re-extracted the affected samples with the corrected surrogates and all of the surrogates were recovered within limits. None of the data was qualified on this basis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) –

Sample J73W3 was designated for MS/MSD analysis. The MS/MSD analysis met the advisory technical acceptance criteria for percent recovery (%R) and relative percent difference (RPD) with the following exceptions:

Compound (Re-extract)	MS %R	MSD %R	Control Limits	RPD	Control Limits
4-Nitrophenol	122*	98*	10-80	22	50
2,4-Dinitrophenol	106*	76	24-96	33	38
Pentachlorophenol	123*	96	9-103	25	50

*outside of control limits

None of the data was qualified on this basis.

Compound	MS %R (Column 1)	MS %R (Column 2)	MSD %R (Column 1)	MSD %R (Column 2)	Control Limits	RPD (Column 1)	RPD (Column 2)	Control Limits
Gamma-BHC	86	90	67	66	56-123	25*	30*	15
Heptachlor	93	96	74	75	40-131	22*	24*	20
Aldrin	93	98	74	75	40-120	23*	26*	22
Dieldrin	99	103	76	77	52-126	26*	29*	18
Endrin	102	112	78	83	56-121	27*	29*	21
4,4'-DDT	102	106	74	77	38-127	30*	31*	27

*outside of control limits

None of the data was qualified on this basis.

Laboratory Control Sample (LCS) - Acceptable

The LCS analysis met the advisory technical acceptance criteria for percent recovery (%R). None of the data was qualified on this basis.

Internal Standards -

The acceptance criteria for internal standards (IS) are ± 30 seconds for retention time (RT) shifts and -50% to +200% of the IS area as compared to the IS RT and area of the daily continuing calibration standard. The internal standards are:

1,4-Difluorobenzene (DFB)	Chlorobenzene-d5 (CBZ)
1,4-Dichlorobenzene-d4 (DCB)	Naphthalene-d8 (NPT)
Acenaphthene-d10 (ANT)	Phenanthrene-d10 (PHN)
Chrysene-d12 (CRY)	Perylene-d12 (PRY)

All of the results met the IS area and RT shift criteria. None of the data was qualified on this basis.

Florisil Cartridge Check - Acceptable

The frequency of analysis and recovery criteria of florisil used during pests/PCB clean-up were met. None of the data were qualified on this basis.

Gel Permeation Chromatography (GPC) Check - Acceptable

The frequency of analysis and recovery criteria of GPC used during pests/PCB clean-up was met. None of the data was qualified on this basis.

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows, met the USEPA spectral matching criteria and were judged to be acceptable except for the following situation: Detected compounds with results below the CRQL and that had weak spectra were qualified as non-detected and reported at the CRQL level by the reviewer.

Pesticide and PCB Aroclors were calculated for both primary (CLP-Pest I) and confirmatory (CLP-Pest II) columns. The reviewer used professional judgement during the final identification and qualification of the single component pesticides and Aroclors. Detected pesticides and Aroclors with %Ds >30% but <60% between the two column concentrations were qualified estimated, "J". The lower of the two concentrations were reported on the Form Is. Detected pesticides and Aroclors at concentration <CRQLs with %Ds >60% between two columns were qualified non-detects, "U" with the reporting limits elevated to the CRQL level.

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and in the associated method blank(s) were crossed-out by the reviewer. Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were also

crossed-out by the reviewer and qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "JN", tentatively identified at the estimated concentration.

Laboratory Contact

The laboratory was contacted and asked to resubmit forms with discrepancies.

Overall Assessment

The total number of data points was 745. Less than 1% of the total data points were qualified non-detect due to VOCs mass spectra which did not meet spectra matching criteria. Less than 1% of the total data points were qualified non-detects due to VOCs blank contamination. Less than 1% of the total data points were qualified unusable due to exceedances in VOC calibration criteria. 1% of the total data points were qualified non-detects due to SVOCs blank contamination. Less than 1% of the total data points were qualified non-detects due to exceedances in Pest primary and confirmatory column concentrations. Less than 1% of the total data points were qualified non-detects due to Pest blank contamination.

All of the samples were analyzed in accordance with technical specifications outlined in the SOW. The data, as qualified, are acceptable and can be used for all purposes.

Data Qualifiers		
	U	The analyte was not detected at or above the reported result.
	J	The analyte was positively identified. The associated numerical result is an estimate.
	UJ	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
	R	The data are unusable for all purposes.
	N	There is evidence the analyte is present in this sample.
	JN	There is evidence that the analyte is present. The associated numerical result is an estimate.
Bias Qualifiers	L	Low bias.
	H	High bias.
	Q	The result is estimated because the concentration is below the Contract Required Quantitation Limits (CRQLs).
	K	Unknown Bias

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATA Case No.: 35417

Mod. Ref No.: _____ SDG No.: J73T9

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: 06C02709

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: PD87C709

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. _____

Date Analyzed: 06/13/2006

GC Column: DB624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	NR

BP 8/20/06

myh/n

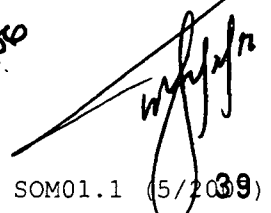
1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD87C709
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

BP 5/25/06

 SOM01.1 (5/2009)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD87C709
Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
% Moisture: not dec. Date Analyzed: 06/13/2006
GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

BL 8/23/00

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 5.87 (g/mL) g Lab File ID: SE31C710
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 14 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	40	
75-15-0	Carbon disulfide	5.0 0.54	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0 0.57	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	19	
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	OR

BP
8/20/06
mg/mta

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 5.87 (g/mL) g Lab File ID: SE31C710
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 14 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	1.2	JQ
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0 0.12	1U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0 0.39	1U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0 0.25	1U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 5.87 (g/mL) g Lab File ID: SE31C710
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 14 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc.

Contract: EP-W-05-026

Lab Code: DATAC

Case No.: 35417

Mod. Ref No.:

SDG No.: J73T9

Matrix: (SOIL/SED/WATER) SOIL

Lab Sample ID: 06C02712

Sample wt/vol: 5.90 (g/mL) g

Lab File ID: SE32C712

Level: (TRACE/LOW/MED) LOW

Date Received: 06/08/2006

% Moisture: not dec. 25

Date Analyzed: 06/14/2006

GC Column: DB624

ID: 0.53

(mm)

Dilution Factor: 1.0

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

Purge Volume: 10.0

(mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
75-71-8	Dichlorodifluoromethane	5.6	U
74-87-3	Chloromethane	5.6	U
75-01-4	Vinyl chloride	5.6	U
74-83-9	Bromomethane	5.6	U
75-00-3	Chloroethane	5.6	U
75-69-4	Trichlorofluoromethane	5.6	U
75-35-4	1,1-Dichloroethene	5.6	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.6	U
67-64-1	Acetone	26	✓
75-15-0	Carbon disulfide	5.6	U
79-20-9	Methyl acetate	5.6	U
75-09-2	Methylene chloride	5.6	U
156-60-5	trans-1,2-Dichloroethene	5.6	U
1634-04-4	Methyl tert-butyl ether	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U
156-59-2	cis-1,2-Dichloroethene	5.6	U
78-93-3	2-Butanone	24	✓
74-97-5	Bromochloromethane	5.6	U
67-66-3	Chloroform	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U
110-82-7	Cyclohexane	5.6	U
56-23-5	Carbon tetrachloride	5.6	U
71-43-2	Benzene	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U
123-91-1	1,4-Dioxane	110	NR

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 5.90 (g/mL) g Lab File ID: SE32C712
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 25 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
79-01-6	Trichloroethene	5.6	U
108-87-2	Methylcyclohexane	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U
75-27-4	Bromodichloromethane	5.6	U
10061-01-5	cis-1,3-Dichloropropene	5.6	U
108-10-1	4-Methyl-2-Pentanone	11	U
108-88-3	Toluene	5.6	U
10061-02-6	trans-1,3-Dichloropropene	5.6	U
79-00-5	1,1,2-Trichloroethane	5.6	U
127-18-4	Tetrachloroethene	5.6	U
591-78-6	2-Hexanone	11	U
124-48-1	Dibromochloromethane	5.6	U
106-93-4	1,2-Dibromoethane	5.6	U
108-90-7	Chlorobenzene	5.6	U
100-41-4	Ethylbenzene	5.6	U
95-47-6	o-Xylene	5.6	U
179601-23-1	m,p-Xylene	5.6	U
100-42-5	Styrene	5.6	U
75-25-2	Bromoform	5.6	U
98-82-8	Isopropylbenzene	5.6	U
79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
541-73-1	1,3-Dichlorobenzene	5.6	U
106-46-7	1,4-Dichlorobenzene	5.6	U
95-50-1	1,2-Dichlorobenzene	5.6	U
96-12-8	1,2-Dibromo-3-chloropropane	5.6	U
120-82-1	1,2,4-Trichlorobenzene	5.6	U
87-61-6	1,2,3-Trichlorobenzene	5.6	U

8/28/06

SOM01.1 (5/2008)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 5.90 (g/mL) g Lab File ID: SE32C712
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. 25 Date Analyzed: 06/14/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

BD 8/25/06

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD88C713
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. _____ Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	NR

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD88C713
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

BP
8/28/06

SOM01.1 (5/2006)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD88C713
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. _____ Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

8/23/06

SOM01.1 (5/2009)

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W7

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02714
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD89C714
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
123-91-1	1,4-Dioxane	100	✓R

Bl 8/23/06

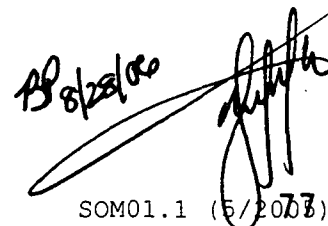
1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W7

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATAC Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02714
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD89C714
 Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
 % Moisture: not dec. _____ Date Analyzed: 06/13/2006
 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U


 SOM01.1 (5/2003)

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W7

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02714
Sample wt/vol: 5.00 (g/mL) mL Lab File ID: PD89C714
Level: (TRACE/LOW/MED) LOW Date Received: 06/08/2006
% Moisture: not dec. Date Analyzed: 06/13/2006
GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	115-07-1	Propene	3.05	6.5	JN
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹EPA-designated Registry Number.

BP 8/28/06
[Signature]
SOM01.1 (5/2008)

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG04C09
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use this run

BP 8/25/00

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATAC Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG04C09
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
 Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/19/2006
 GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

Use this run

12/8/2006

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG04C09
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	18	JB
02		Unsaturated Hydrocarbon	4.17	2.6	JB
03	324-60-8	1,1-Bisphenyl, 2,2-dichloro	7.73	2.1	JB
04	118-79-6	Phenol, 2,4,6-tribromo	10.25	42	JNB
05	1718-51-0	p-Terphenyl-d14	14.27	48	JNB
06	100022-00-0	6,8-Dodecadien-1-ol (6Z,8Z)	15.28	2.3	JN
07		Polycyclic hydrocarbon	18.92	10	JB
08		Polycyclic hydrocarbon	24.30	11	JB
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

BP 8/29/06

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9RX

Lab Name: DataChem Laboratories, Inc.Contract: EP-W-05-026Lab Code: DATACCase No.: 35417

Mod. Ref No.: _____

SDG No.: J73T9Matrix: (SOIL/SED/WATER) WATERLab Sample ID: 06C02709R1Sample wt/vol: 1000 (g/mL) mLLab File ID: RNS09C09Level: (LOW/MED) LOWExtraction: (Type) CONT% Moisture: _____ Decanted: (Y/N) NDate Received: 06/08/2006Concentrated Extract Volume: 1000 (uL)Date Extracted: 06/23/2006Injection Volume: 1.0 (uL) GPC Factor: _____Date Analyzed: 06/26/2006GPC Cleanup: (Y/N) N

pH: _____

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use first run

BP 8/28/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709R1
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS09C09
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: _____ Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
 Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/26/2006
 GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	<u>Q</u>
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 2.2	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

use first run

20 8/28/06

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73T9RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS09C09
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	 	Unknown oxyhydrocarbon	4.53	5.7	JB
02	 	Polycyclic hydrocarbon	18.87	4.8	JB
03	 	Polycyclic hydrocarbon	24.24	3.9	JB
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ14C10
 Level: (LOW/MED) LOW Extraction: (Type) SONC
 % Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
 Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
 GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	<u>Q</u>
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200 11	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	390	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	390	U
83-32-9	Acenaphthene	200	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATAC Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ14C10
 Level: (LOW/MED) LOW Extraction: (Type) SONC
 % Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
 Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
 GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
51-28-5	2,4-Dinitrophenol	390	U
100-02-7	4-Nitrophenol	390	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	390	U
534-52-1	4,6-Dinitro-2-methylphenol	390	U
86-30-6	N-Nitrosodiphenylamine ¹	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	390	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	200 180	U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

¹Cannot be separated from Diphenylamine

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ14C10
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	490	JB
02		Polycyclic hydrocarbon	18.90	120	J
03	56881-08-4	7-Hydroxy-3-(1,1-dimethylprop-2-enyl)cou	20.39	88	JN
04	100014-97-0	Ledene oxide-(II)	23.40	79	JN
05		Polycyclic hydrocarbon	24.31	93	J
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG05C11
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: _____ Decanted: (Y/N) _____ Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
 Injection Volume: 1.0 (uL) GPC Factor: _____ Date Analyzed: 06/19/2006
 GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy) methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

use this run

8/26/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG05C11
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	0.23	JQ
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	0.48	JQ
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	0.59	JQ
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 0.68	JQ
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

use this run

SOM01.1 (5/288)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG05C11
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

8/22/06

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	24	JB
02		Unsaturated Hydrocarbon	4.16	3.9	JB
03	324-60-8	1,1'-Biphenyl, 2-fluoro	7.72	87	JNB
04	118-79-6	Phenol, 2,4,6-tribromo-	10.24	49	JNB
05	1718-51-0	p-Terphenyl-d14	14.28	61	JNB
06		Polycyclic hydrocarbon	18.91	8.5	JB
07		Polycyclic hydrocarbon	24.30	9.1	JB
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

8/28/06

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711R1
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS10C11
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use first run

8/23/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711R1
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS10C11
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 2.2	U BU
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

Use first run

SOM01.1 (5/2003)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W1RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS10C11
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/23/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown oxyhydrocarbon	4.53	11	JB
02		Polycyclic hydrocarbon	18.88	20	JB
03		Polycyclic hydrocarbon	24.24	25	JB
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ15C12
 Level: (LOW/MED) LOW Extraction: (Type) SONC
 % Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
 Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
 GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
100-52-7	Benzaldehyde	230	U
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	110	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	230	U

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ15C12
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
132-64-9	Dibenzofuran	230	U
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamine ¹	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-81-7	Bis(2-ethylhexyl)phthalate	230 110	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U
58-90-2	2,3,4,6-Tetrachlorophenol	230	U

¹Cannot be separated from Diphenylamine

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
Sample wt/vol: 30.0 (g/mL) g Lab File ID: RNJ15C12
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2006
Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/21/2006
GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Polycyclic hydrocarbon	18.92	180	J
02		Polycyclic hydrocarbon	24.28	140	J
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

bl 8/28/06

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG06C13
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl) ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use this run

bl 8/28/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATAC Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG06C13
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	0.57	JQ
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	3.1	JQ
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 0.86	JQ
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

Use this run

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNG06C13
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/13/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/19/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	4.10	19	JB
02		Unsaturated Hydrocarbon	4.16	2.8	JB
03	321-60-8	1,1'-Biphenyl, 2-fluoro-	7.72	78	JNB
04	118-79-6	Phenol, 2,4,6-tribromo-	10.24	50	JNB
05	1718-51-0	p-Terphenyl-d14	14.28	48	JNB
06		Polycyclic hydrocarbon	18.91	4.2	JB
07		Polycyclic hydrocarbon	24.31	4.7	JB
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

²EPA-designated Registry Number.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713R1
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS06C13
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/20/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	5.0	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	5.0	U
95-48-7	2-Methylphenol	5.0	U
108-60-1	2,2'-Oxybis(1-chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	5.0	U
621-64-7	N-Nitroso-di-n-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	5.0	U
105-67-9	2,4-Dimethylphenol	5.0	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	5.0	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	5.0	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	5.0	U
95-95-4	2,4,5-Trichlorophenol	5.0	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

Use first run

8/28/06

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713R1
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS06C13
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/20/2006
 Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
 GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
121-14-2	2,4-Dinitrotoluene	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-73-7	Fluorene	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine ¹	5.0	U
95-94-3	1,2,4,5-Tetrachlorobenzene	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-81-7	Bis(2-ethylhexyl)phthalate	5.0 0.45	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U
58-90-2	2,3,4,6-Tetrachlorophenol	5.0	U

¹Cannot be separated from Diphenylamine

use first run.

SOM01.1 (5/2006) 12/8/2006

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J73W3RX

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713R1
Sample wt/vol: 1000 (g/mL) mL Lab File ID: RNS06C13
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: Decanted: (Y/N) N Date Received: 06/08/2006
Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/20/2006
Injection Volume: 1.0 (uL) GPC Factor: Date Analyzed: 06/26/2006
GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unsaturated Hydrocarbon	3.95	5.4	J
02		Unknown oxyhydrocarbon	4.53	2.1	JB
03		Polycyclic hydrocarbon	18.87	17	JB
04		Polycyclic hydrocarbon	24.23	26	JB
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A	19	J

²EPA-designated Registry Number.

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA C Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: 21060625A050,21060625B050
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Extraction: (Type) SEPF Date Extracted: 06/13/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.0014	JQ
76-44-8	Heptachlor	0.0025	JQ
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10 0.0020	JPU
72-20-8	Endrin	0.0016	JPU
33213-65-9	Endosulfan II	0.10 0.0019	JPU
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.0049	JQ
50-29-3	4,4'-DDT	0.10 0.0030	JPU
72-43-5	Methoxychlor	0.50 0.10	JPU
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10 0.011	JPU
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U

BP
8/28/06

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: 21060625A057,21060625B057
 % Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
 Extraction: (Type) SONC Date Extracted: 06/15/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
319-84-6	alpha-BHC	2.0	U
319-85-7	beta-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
76-44-8	Heptachlor	2.0	U
309-00-2	Aldrin	2.0	U
1024-57-3	Heptachlor epoxide	0.042	J/Q
959-98-8	Endosulfan I	2.0	U
60-57-1	Dieldrin	3.9	U
72-55-9	4,4'-DDE	3.9	U
72-20-8	Endrin	3.9	U
33213-65-9	Endosulfan II	3.9	U
72-54-8	4,4'-DDD	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
50-29-3	4,4'-DDT	3.9	U
72-43-5	Methoxychlor	2.0 1.6	U
53494-70-5	Endrin ketone	3.9	U
7421-93-4	Endrin aldehyde	3.9	U
5103-71-9	alpha-Chlordane	2.0	U
5103-74-2	gamma-Chlordane	2.0	U
8001-35-2	Toxaphene	200	U

BP
8/23/06

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: 21060625A051, 21060625B051
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Extraction: (Type) SEPF Date Extracted: 06/13/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
319-84-6	alpha-BHC	0.05 0.0022	PU
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.05 0.0033	PU
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.0021	JQ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10 0.0084	PU
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10 0.0027	PU
50-29-3	4,4'-DDT	0.10 0.0068	PU
72-43-5	Methoxychlor	0.50 0.079	JP
53494-70-5	Endrin ketone	0.10 0.0028	PU
7421-93-4	Endrin aldehyde	0.10 0.010	JP
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U

BP 8/28/00

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: 21060625A058,21060625B058
 % Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
 Extraction: (Type) SONC Date Extracted: 06/15/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
319-84-6	alpha-BHC	2.3	U
319-85-7	beta-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	2.3	U
76-44-8	Heptachlor	2.3	U
309-00-2	Aldrin	2.3	U
1024-57-3	Heptachlor epoxide	2.3	U
959-98-8	Endosulfan I	2.3	U
60-57-1	Dieldrin	4.4	U
72-55-9	4,4'-DDE	4.4	U
72-20-8	Endrin	4.4	U
33213-65-9	Endosulfan II	4.4	U
72-54-8	4,4'-DDD	4.4	U
1031-07-8	Endosulfan sulfate	4.4	U
50-29-3	4,4'-DDT	4.4	U
72-43-5	Methoxychlor	23.16	U
53494-70-5	Endrin ketone	4.4	U
7421-93-4	Endrin aldehyde	4.4	U
5103-71-9	alpha-Chlordane	2.3	U
5103-74-2	gamma-Chlordane	2.3	U
8001-35-2	Toxaphene	230	U

BP 8/22/06

1G - FORM I PEST
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
 Sample wt/vol: 1000 (g/mL) mL Lab File ID: 21060625A052, 21060625B052
 % Moisture: Decanted: (Y/N) Date Received: 06/08/2006
 Extraction: (Type) SEPF Date Extracted: 06/13/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/2006
 Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/L</u>	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.0022	J/Q
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.05 0.0012	J/U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10 0.0073	J/U
72-43-5	Methoxychlor	0.50 0.035	J/U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10 0.0063	J/U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U

BP 8/28/06

1H - FORM I ARO
AROCOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73T9

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02709
Sample wt/vol: 1000 (g/mL) mL Lab File ID: 19060620A020,19060620B020
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Extraction: (Type) SEPF Date Extracted: 06/13/2006
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N
Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

SD
8/28/06

1H - FORM I ARO
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W0

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATAAC Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02710
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19060620A028,19060620B028
 % Moisture: 14 Decanted: (Y/N) N Date Received: 06/08/2006
 Extraction: (Type) SONC Date Extracted: 06/14/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
 Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N
 Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
12674-11-2	Aroclor-1016	39	U
11104-29-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

BP
8/28/06

1H - FORM I ARO
AROCOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W1

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02711
Sample wt/vol: 1000 (g/mL) mL Lab File ID: 19060620A021,19060620B021
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Extraction: (Type) SEPF Date Extracted: 06/13/2006
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N
Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

BP
5/25/06

1H - FORM I ARO
 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W2

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
 Lab Code: DATA Case No.: 35417 Mod. Ref No.: _____ SDG No.: J73T9
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 06C02712
 Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19060620A029,19060620B029
 % Moisture: 25 Decanted: (Y/N) N Date Received: 06/08/2006
 Extraction: (Type) SONC Date Extracted: 06/14/2006
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
 Injection Volume: 2.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N
 Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

BP
8/25/06

1H - FORM I ARO

1 AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

J73W3

Lab Name: DataChem Laboratories, Inc. Contract: EP-W-05-026
Lab Code: DATA Case No.: 35417 Mod. Ref No.: SDG No.: J73T9
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 06C02713
Sample wt/vol: 1000 (g/mL) mL Lab File ID: 19060620A022,19060620B022
% Moisture: Decanted: (Y/N) Date Received: 06/08/2006
Extraction: (Type) SEPF Date Extracted: 06/13/2006
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/21/2006
Injection Volume: 2.0 (uL) GPC Factor: Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N
Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

7/28/06